FLEET OPERATORS' REFERENCE ANNUAL

COMMERCIAL CAR JOURNAL

THE MAGAZINE FOR FLEET OPERATORS

APRIL 1947



Reo quality always pays off

eo is making a name for itself with ighway carriers whose income depends ntirely on truck operations and truck conomies. *Transportation is their busi-*ess. Here Reo quality really pays off. Modern truck engineering, heavy-duty dimensions, quality materials and manufacture cut repairs to a minimum—provide the dependability essential to time-able schedules and the long life that helps protect the investment. Check up on Reo specifications. The massive, cold-riveted frames, rugged axles, springs and wheels are built to carry the heavy loads. The precision-built engines deliver capacity loads on time and at low cost. Sales and service through nation-wide organization of dealers, distributors and factory branches. For particulars write REO MOTORS, INC., Lansing 20, Mich.

STANDARDIZE ON REO

1904 • AMERICA'S TOUGHEST TRUCK • 1947



THAT'S RIGHT . . . for a truck that will save you money, get a "*Job-Rated*" truck.

A "*Job-Rated*" truck is a truck that FITS your job —a truck in which every unit is engineered and "*Job-Rated*" for the size and kind of loads you carry.

Such a truck is more dependable. It will last longer. It will save money on operating and upkeep costs.

Your "*Job-Rated*" truck will be the right one of 175 Dodge chassis models to give you maximum economy and dependability. It will have the right one of 7 different engines.

It will have the right one of 5 clutches, 4 transmissions, 18 rear axles—the right units throughout to fit YOUR job . . . save YOU money!

To get such a truck, see your Dodge dealer . . . because *only* Dodge builds "*Job-Rated*" trucks!

DODGE DIVISION OF CHRYSLER CORPORATION



ONLY DODGE BUILDS "*Job-Rated*" TRUCKS

DODGE

Fit the Job . . . Last Longer !



IT'S RUMORED THAT

autos are now being made out of glass!

If by glass you mean Fiberglas, you're right, Mr. Wright. The car is an invention of William Stout who says "The entire auto body, including doors, floor, roof, sides and ends, is constructed of Fiberglas. I think it's the car of the future!"

Contributed by G. D. Wright
Portland, Oregon



IT'S RUMORED THAT

women are better drivers than men!

You've heard (maybe said) the opposite for years. But listen to this: According to an announcement from the National Safety Council last year, although women held 27% of the drivers' licenses, they accounted for only 12% of the accidents! Er, think your wife ought to see this?



IT'S RUMORED THAT

a certain fleet kept 80 out of 89 cabs in continuous service!

Right, according to Walter Habermehl, Maintenance Supt. of St. Louis Black & White Cabs. "I wish to express my complete satisfaction with Perfect Circle's Fleet Survey Program . . . in a rebore job, we average 100,000 miles before we re-ring . . . although cab motors run idle much of the time, we get over 13 miles per gallon and excellent savings on oil." Your P. C. distributor can tell you about this plan. Or write direct to Perfect Circle.



IT'S RUMORED THAT

thin superintendents live longer than fat superintendents!

True, according to Mr. C. A. Flitcraft, who says, "Regardless of whether a man's a superintendent, a doctor, a lawyer or an Indian chief, if he's thin, chances are he'll live longer." Mr. Flitcraft ought to know, he is a leading underwriter of Penn Mutual Life Insurance Company.



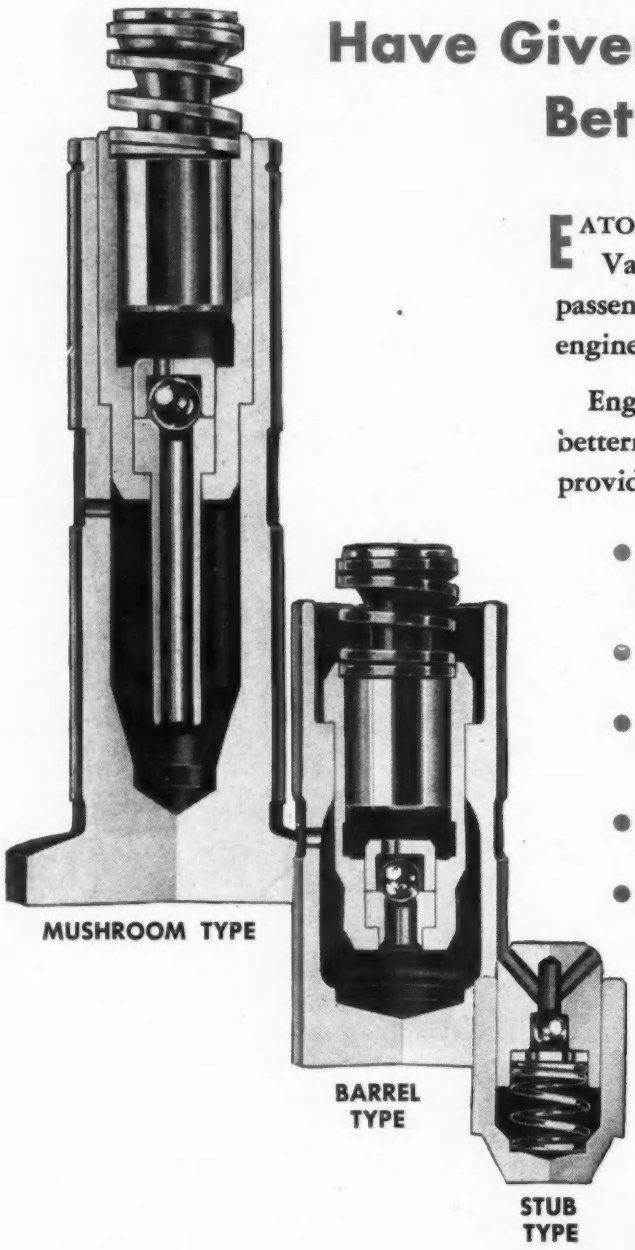
The Perfect Circle Company, makers of Perfect Circle *Custom Made* Piston Ring Sets, will pay fifty dollars ($50) for each rumor, fact or fiction, accepted for this page. Send your rumor to Rumor Page, Perfect Circle, Hagerstown 6, Indiana. All contributions become our property and cannot be returned or acknowledged.

Zero-Lash

Registered U.S. Patent Office

HYDRAULIC VALVE LIFTERS

Have Given Thousands of Engines Better Performance



EATON has produced many million *Zero-Lash* Hydraulic Valve Lifters and lash adjuster units for installation in passenger cars, trucks and buses, military vehicles, marine engines and industrial engines.

Engine and vehicle manufacturers recognize the specific betterments which *Zero-Lash* Hydraulic Valve Lifters provide—

- **Accurate Valve Timing and Perfect Seating at All Engine Speeds and Temperatures.**
- **Longer Life for Valves and Seats.**
- **Freedom from Tappet Adjustments for the Life of the Engine.**
- **Silent Valve Train Operation.**
- **Better Idling at Low Speeds.**

*

Eaton engineers will be glad to discuss the application of Zero-Lash Hydraulic Valve Lifters to engines now in production or in design.

Zero-Lash Hydraulic Valve Lifters are available for all types of automotive, aircraft, marine, and industrial engines, both gasoline and Diesel. They are not recommended for installation in individual engines in the field, but only in cooperation with engine manufacturers' engineering departments.

EATON
MANUFACTURING COMPANY
WILCOX-RICH DIVISION
9771 FRENCH ROAD DETROIT 13, MICHIGAN



Before and after —

MECHANICAL TUNE-UP

BEFORE YOU TUNE-UP!

Add one quart of Permatex Toon-Oyl to the crankcase oil...and let the car idle. Sludge and carbon-gum binders will dissolve quickly. Valves, piston rings, oil lines and oil screens will operate freely. Then you'll have a clean engine . . . ready for all your mechanical adjustments.

AFTER YOU TUNE-UP!

The best procedure is to drain out the old crankcase oil (with its dissolved sludge and gum) and replace with fresh oil containing one quart of Permatex Toon-Oyl. Then the car owner will get easier starting, snappier pick-up, more power and smoother driving.

Tune-up Chemically!

℞ ADD 1 QUART OF PERMATEX TOON-OYL TO 5 OR 6 QUARTS OF ANY TYPE OF MOTOR OIL IN THE CRANKCASE

PERMATEX COMPANY, INC., BROOKLYN 29, N. Y.

COMMERCIAL CAR JOURNAL, Vol. LXXIII, No. 2. Published monthly by Chilton Co., N. W. Cor. Chestnut & 56th Sts., Philadelphia 39, Pa. Subscription price: United States and Possessions, Mexico and Latin American Countries, $5.00 per year; Single copies 50¢, except April issue, $1.00. Canada and Foreign, $10.00 per year. Acceptance under the Act of June 5, 1934, authorized December 18, 1934.



Tune in . . .
TEXACO STAR THEATRE
presents the NEW
TONY MARTIN SHOW
every Sunday night.
See newspaper for
time and station.

TEXACO

TEXACO

...GET GREATER POWER AND ECONOMY

TEXACO D-303 Motor Oil is designed to assure freedom from carbon, varnish, sludge and other engine deposits that steal power and run up your operating and maintenance costs.

Texaco D-303 Motor Oil cleans as it lubricates — a fully detergent and dispersive oil. Contaminants that cause deposits are kept off the engine parts and held in suspension to be drained off with the oil. Thus, *the oil gets dirty but the engine stays clean!*

When you use *Texaco D-303 Motor Oil* you assure active valves, and free rings for proper compression. Special additives prevent corrosion and rust and definitely reduce wear. Your engines are kept in shape to deliver full power with minimum fuel consumption and far fewer repairs and overhauls.

Cut your fleet operating costs — use Texaco Products and Lubrication Engineering Service. Just call the nearest of the more than 2300 Texaco distributing plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

FOR HIGHER EFFICIENCY — LOWER MAINTENANCE COSTS

Texaco Marfak gives chassis parts greater protection with fewer applications. It stays put — resists road splash and the hammer blows of rough service — assures fewer repairs and replacements.

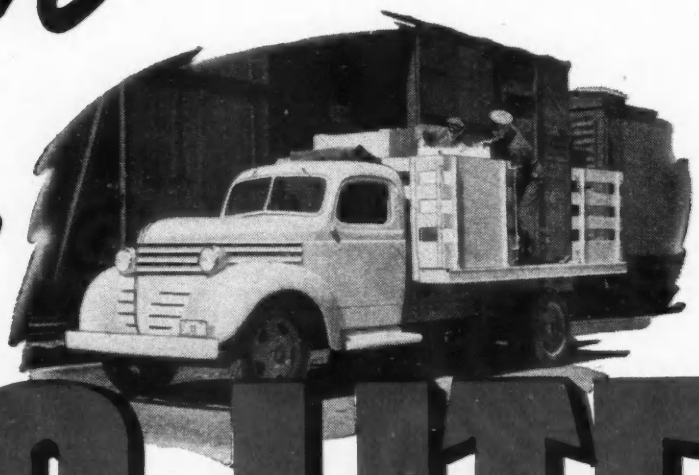
Texaco Marfak Heavy Duty prolongs the life of wheel bearings. It stays in the bearings despite high speeds, heavy loads, extremes of temperature — sealing itself in, sealing out dirt and moisture, assuring safer braking. No seasonal change required.

Texaco transmission and differential lubricants make gears last longer, operate more quietly and smoothly.

Lubricants and Fuels

FOR THE TRUCKING INDUSTRY

Switch to...



AUTO-LITE

THE ORIGINAL EQUIPMENT LINE

AUTO-LITE



TRANSPORT SPARK PLUGS

Auto-Lite Transport Spark Plugs, built especially for heavy duty bus, truck and tractor operation, have proved their value for fleet owners coast to coast. Today more fleets are switching to Auto-Lite Spark Plugs than ever before.



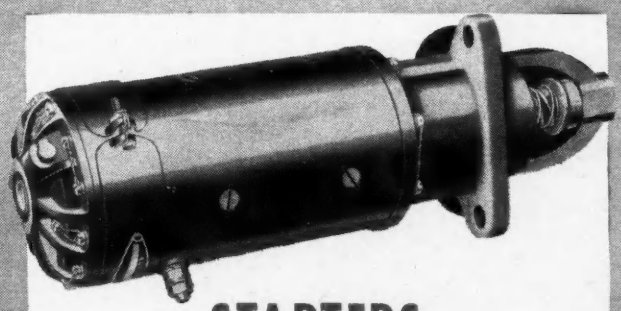
HEAVY DUTY BATTERIES

Made with Fibre-glass, Auto-Lite heavy duty batteries outlast batteries without this feature. Made in sizes and voltages suitable for every automotive need, Auto-Lite batteries are the choice of automotive engineers who specify original equipment for many leading makes of cars, buses, trucks and tractors.



GENERATORS

Every automotive operating requirement is met by the Auto-Lite line of generators. Built for dependable long life, they also come in oversize capacities to take care of load when extra accessories require more current.



STARTERS

Fleet operators know that dependable starting motors mean quicker starts, more running time at a profit. Rugged Auto-Lite starters have a time-proven record of dependability and durability which makes them the choice of engineers who specify original equipment for leading makes of trucks and buses.

WIRE and CABLE

The Auto-Lite wire and cable line is complete to meet every fleet need. Featuring the famous automotive Steelductor spark plug wire, these products are furnished on spools or convenient cut-to-length sets.



THE ELECTRIC AUTO-LITE COMPANY

Toronto, Ontario — Toledo 1, Ohio

TUNE IN THE AUTO-LITE RADIO SHOW STARRING DICK HAYMES, THURSDAYS, 9:00 P. M.—E. T. ON CBS

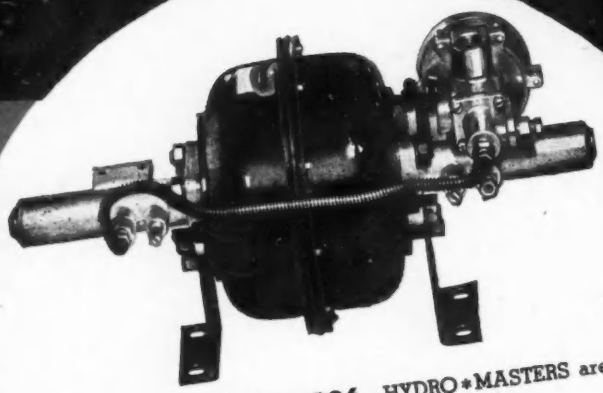
means the Life-Line of Your Fleet

AUTO-LITE MEANS PRECISION MANUFACTURING

Money cannot buy better electrical products than Auto-Lite

SUPER-STOPPERS

BETTER 5 WAYS!



HYDRO*MASTER No. 126—HYDRO*MASTERS are used in two sizes, for 1¼"-1½" and 1½"-1¾" master cylinders.

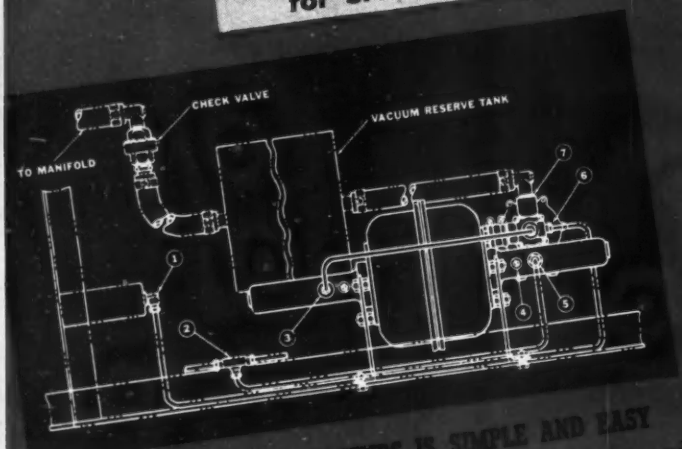
HYDRO*MASTERS are the latest units in the complete, long-established ROADMASTER line of Vacuum Brake Controls for all Truck, Bus and Trailer installations. The line includes power chambers, tanks, valves and fittings . . . also complete ready-assembled kits at special kit prices for most Truck and Trailer installations, and Foot Valve Kits for mechanical brakes.

1. *Latest postwar engineered hydraulic brake control* . . . light, compact, streamlined, super-efficient.
2. *A complete, self-contained, ever-ready unit* . . . equipped with stationary hydraulic cylinder seals manufactured to the highest specifications . . . reciprocating piston shaft . . . built-in air cleaner . . . universal mounting brackets. *Requires no adjustment or lubrication* . . . unaffected by road shocks or vibration.
3. *Gives up to 500% increase in braking power*—fast, sure, fully equalized, easy to apply.
4. *Assures silken-smooth brake application*, making the most of traction on any road, in any weather.
5. Fits any hydraulic-equipped truck, trailer, bus or car installation.

HYDRO*MASTER

HYDRAULIC VACUUM POWER BRAKE CONTROLS

for SAFE STOPS and SLOW-DOWNS WITHOUT BUMP, JAR OR C-H-A-T-T-E-R



INSTALLING HYDRO*MASTERS IS SIMPLE AND EASY

Decide location of HYDRO*MASTER unit on truck frame and attach it with 3-point universal brackets shown above, so placed that bleeder valves 3 and 4 are on top . . . Connect copper tubing from master cylinder hydraulic outlet fitting No. 1 to fitting No. 6 on power unit control valve . . . Finally connect copper tubing from power unit No. 5 to hydraulic distributing block No. 2.

Complete detailed directions and layout sheets, including connections for vacuum system and for bleeding hydraulic system . . . also full instructions for making any HYDRO*MASTER or ROADMASTER installation on any make of trucks, trailers, busses, etc. . . . *free on request.* Write for complete service information—today.

IN OPERATION on thousands of trucking units, HYDRO*MASTERS give owners and drivers complete control, maximum service, economy, stamina and dependability.

Service men can recommend and install HYDRO*MASTERS—and all ROADMASTER Vacuum Brake Controls—with assurance that users will be enthusiastic over their performance.

Build business and profits with ROADMASTERS. Write today for specification sheets and prices.

ROADMASTER
POWER BRAKE CONTROLS

2316 South Flower Street
Los Angeles, Calif.

ROADMASTER PRODUCTS COMPANY

Chestnut and Center Streets
Valparaiso, Indiana

a 30-year user of dependable

CHAMPION

AMERICA'S FAVORITE SPARK PLUG



Gibson Lines, Serving the Sacramento Valley Completely, Stresses Importance of Dependable Service!

A struggling little stage line, consisting in 1915 of one Model-T and a 40-mile run between Sacramento and Isleton, California, has grown into one of the largest local carriers in that area. Last year the Gibson Lines carried over four million passengers in its fleet of modern buses! Obviously, the company slogan—"Friendly—Courteous—Dependable"—is being lived up to in the fullest degree. Gibson Lines have always been users and boosters of *DEPENDABLE* Champion Spark Plugs. As do most other bus lines and fleets of trucks, they depend on Champions to help them get lowest possible cost per passenger- or ton-mile. Champions will do the same for your fleet. Ask for America's *favorite* spark plug!

CHAMPION SPARK PLUG COMPANY, TOLEDO 1, OHIO

Listen to the CHAMPION ROLL CALL, Harry Wismer's fast sportscast every Friday night, 9:55 EST over the ABC network

FOLLOW THE EXPERTS... **SPECIFY DEPENDABLE CHAMPIONS FOR YOUR FLEET**

While the Memory is Fresh



PREPARE FOR NEXT WINTER

HERE'S the widely-known OSHKOSH W-906 following up a February blizzard. During spring, summer and fall, it will play an important part in highway construction and maintenance—then back on the urgent snow-removal job again.

There are no "off seasons" for OSHKOSH.

These powerful 4-Wheel Drive trucks are ruggedly engineered to stand up under many years of tough, battering winter work. Yet they are so flexible they do heavy hauling and many other types of work to pay their way every month of the year. OSHKOSH is economical, year-around equipment.

"While the memory is fresh, prepare for next winter"

Write for descriptive literature
SERVICE STATIONS LOCATED AT CONVENIENT POINTS THROUGHOUT THE U. S.

OSHKOSH MOTOR TRUCK, INC.
OSHKOSH, WISCONSIN

OSHKOSH
4 WHEEL DRIVE TRUCKS

Sunrise service for contractors



. . . a typical service to contractor-customers of Standard Oil.

ALTHOUGH it meant climbing out of bed before sunup, the Standard Oil Agent at Boyne City, Michigan, was delivering gasoline, Diesel fuels, and lubricants to a contractor-customer long before the roosters crowed. As a result, this contractor's equipment was on the job early, ready for a long day of uninterrupted work.

This typical example illustrates how your requirements get top priority from Standard Oil. In addition to the local help of Standard Oil Agents, you are offered the services of a Standard Oil Automotive Engineer on any job you are starting in the Middle West. This Engineer will:

- help you choose the top quality Standard Oil products that are required to keep your equipment on the job.
- work with your maintenance men on any troublesome maintenance problem.
- provide a Streamlined Preventive Maintenance Plan.
- set up delivery schedules to meet your job needs.

Finally, this Engineer and the Standard Oil Agent will follow through from start to finish of your work, keeping products flowing where you want them—when you need them.

If you are located in the Midwest, phone the nearest Standard Oil Company (Indiana) office or write 910 South Michigan Avenue, Chicago 80, Illinois, and tell us where and when you'd like to meet an Automotive Engineer.

STANDARD OIL COMPANY (INDIANA) STANDARD SERVICE

GOOD-BYE TO FINAL DRIVE PROBLEMS!

Hypoid Gearing is here! . . . in new Timken "3 for 1" Axles!

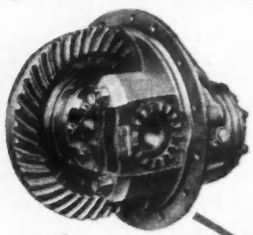
Not in just one or two new axles, but in a *complete new line* of Advanced-Related Design—in a *complete range* of *capacities!*

In each capacity you get a choice of the three final drives shown below, each interchangeable with the others in the *same axle housing*—using the *same axle shafts.*

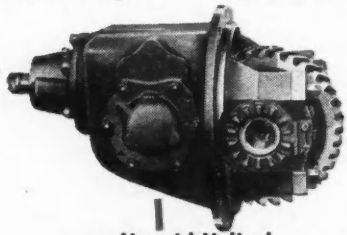
Now—there is absolutely no reason why every truck owner can not have the right axle and right final drive for the job. Now—every truck from medium to heavy-duty capacity can have the *proved economy, durability and dependability of Timken Hypoid "Hy-Performance" Gearing.*

To be certain of these advantages, ask about the axles when you buy trucks. Specify Timken "3 for 1," the newest and most modern line of axles in the industry!

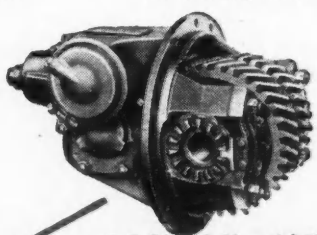
THE TIMKEN-DETROIT AXLE CO. • DETROIT 32, MICH.
WISCONSIN AXLE DIVISION • OSHKOSH, WIS.
TIMKEN AXLE BRAKE DIVISION • DETROIT 32, MICH.



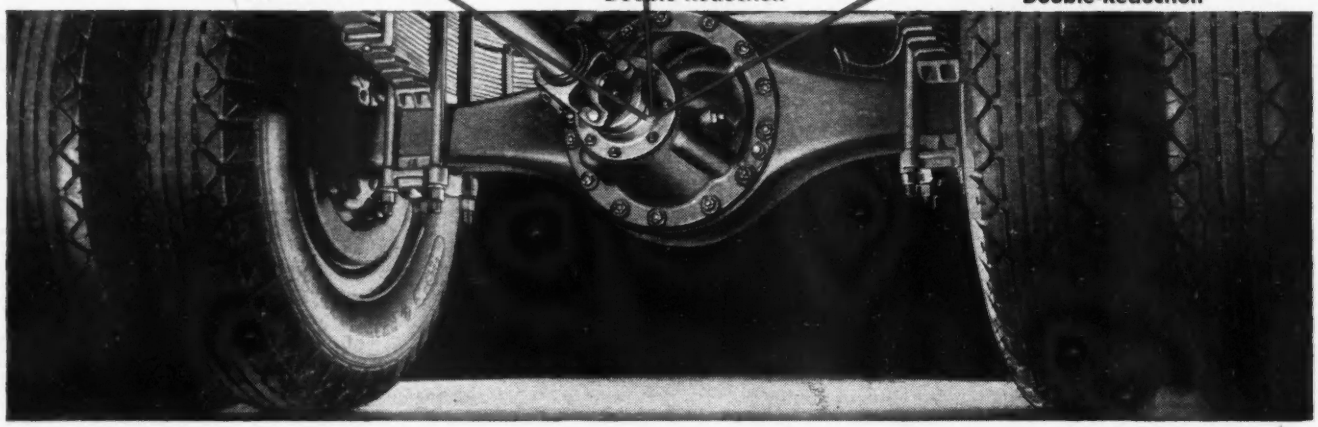
✔ Hypoid Gear

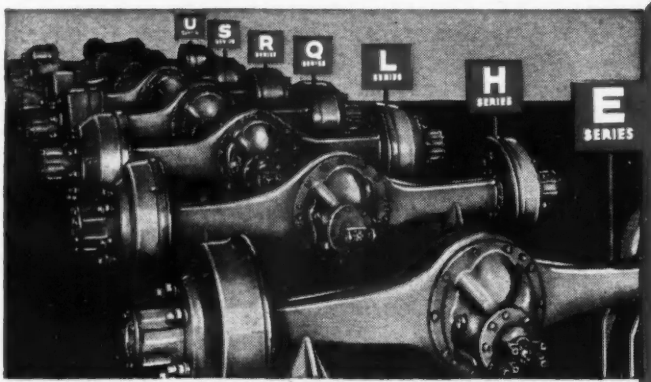


✔ Hypoid-Helical Double-Reduction



✔ 2-Speed Hypoid-Helical Double-Reduction





New *Alphabet Series* of Timken "3 for 1" Axles featuring Hypoid Gearing for all medium, light-heavy, and heavy-duty vehicles. GVW ratings from 14,500 to 33,000 lbs. GCW ratings from 29,500 to 58,000 lbs.

NEW TIMKEN 3 for 1 AXLES

1. **Seven new related series of axles providing a complete range of capacities for all medium, light-heavy and heavy-duty requirements.**
2. **Three optional types of final drive in each capacity, each interchangeable in the same axle housing using the same axle shafts.**
3. **Wide range of optional final drive gear ratios.**
4. **New Advanced-Related Design, with exclusive Timken Hypoid "Hy-Performance" Gearing throughout the entire line.**

He's Cutting Your Operating Costs!

● Zip! Every time he brings down the cutter, another tough Kelly gets started on its way to help reduce some trucker's operating costs!

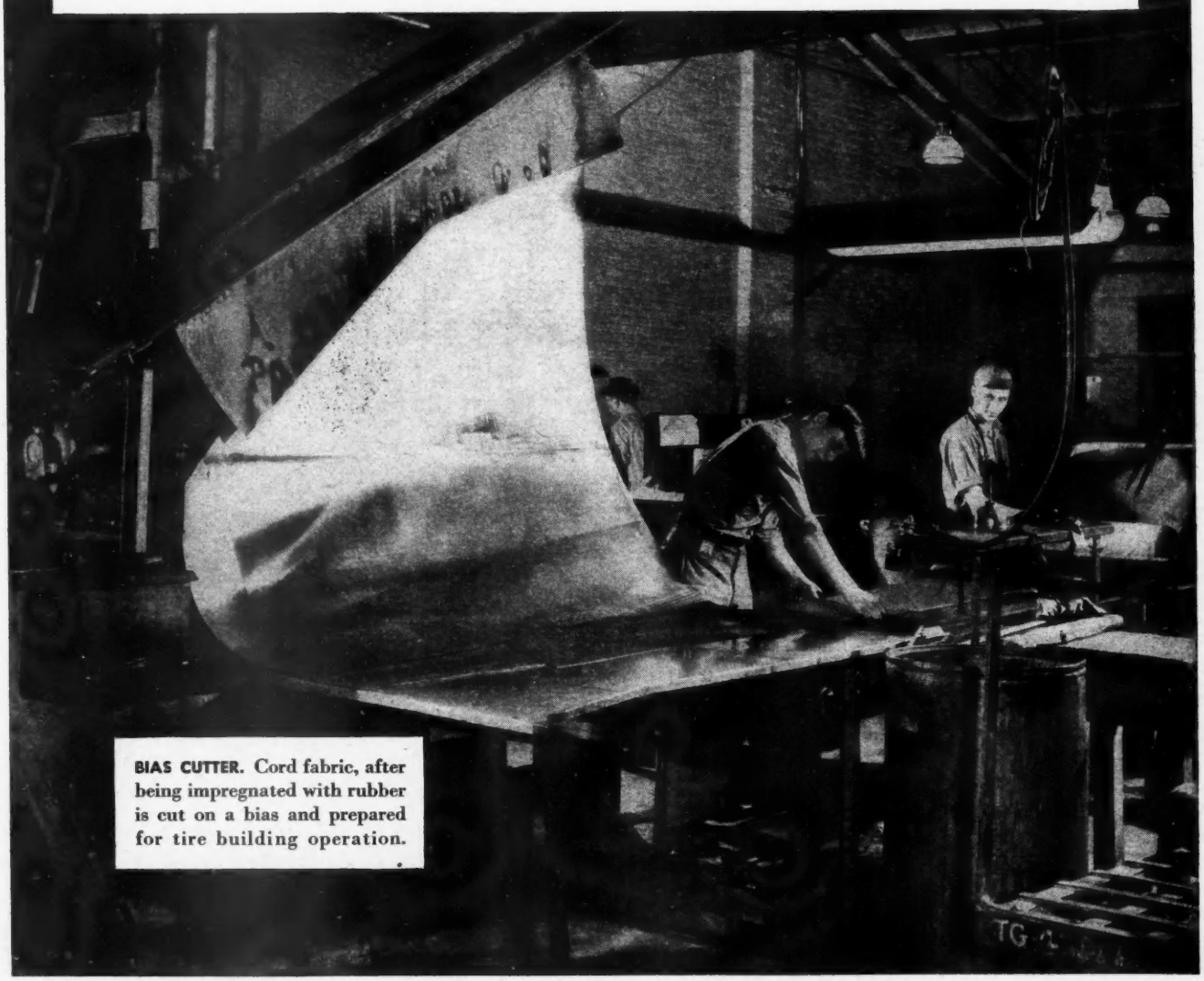
Kellys have been delivering *more* revenue miles ever since trucking began. Whether for long-distance hauls or starting-and-stopping city deliveries, Kellys carry the load after less durable tires are worn out.

Today's new Kelly is the best yet. Its tightly twisted rayon cord body, insulated with *extra natural rubber*, keeps cool even at high speeds. And Kelly's tough Armorubber Tread compound is so tough, it actually outwears *steel*.

Give Kellys the test on your equipment. Compare their road performance with any other. Compare, too, the *profit miles* you'll get from every Kelly—"the trucker's tire!"



THE KELLY-SPRINGFIELD TIRE COMPANY, Cumberland, Maryland



BIAS CUTTER. Cord fabric, after being impregnated with rubber is cut on a bias and prepared for tire building operation.

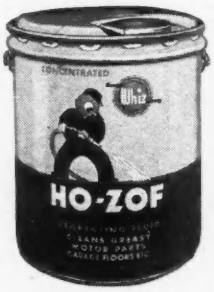
TO GIVE ENGINES NEW *life*



GET Pedrick "HEAT-SHAPED" PISTON RINGS

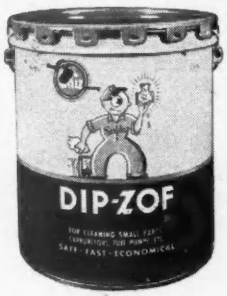
● You can be more certain of putting new life into work-weary engines when you recondition with Pedrick "Heat-Shaped" piston rings. "Heat-Shaping" develops characteristics in the ring that enable it to retain proper tension for its full life. This means less tapering off in efficiency and more time between overhauls. *Only* PEDRICK piston rings are "Heat-Shaped." Ask for them in Engineered Sets, backed by the most liberal ring-*and*-labor guarantee in the industry. WILKENING MANUFACTURING CO., Philadelphia 42, Pa. *In Canada:* Wilkening Manufacturing Co. (Canada) Ltd., Toronto.





WHIZ HO-ZOF

An economical concentrate. Dilute with 4 to 8 parts kerosene. Safely removes grease, oil, and grime from motors, tools, motor parts, floors. Non-inflammable. No noxious fumes. Easily removes accumulations of grease, oil, grime.



WHIZ DIP-ZOF

The modern, chemical way to clean carburetors and other small metal parts. A cold immersion cleaner that quickly removes hardened deposits of grease, sludge, carbon, gum, varnish, paint, ethyl stain without scraping.

Every truck, bus, car in your fleet needs MOTOR RYTHM! When engines act up, pour MOTOR RYTHM through the carburetor and watch engine troubles disappear in a cloud of exhaust smoke! It cleans out harmful, power-wasting engine deposits the modern, chemical, *safe* way—*keeps your equipment on the road . . . cuts operating and maintenance costs!*

Make MOTOR RYTHM a must in your maintenance routine! Pour it through the carburetor for a *chemical* tune-up . . . add it to the crankcase regularly to *keep* engines clean inside . . . use it to break in *new* engines safely. MOTOR RYTHM is effective with all motor oils, including the new compounded and detergent types. *R. M. Hollingshead Corporation, Camden, New Jersey; Toronto, Canada. Warehouses: Dallas, San Francisco, Chicago.*

A PRODUCT OF

Whiz Hollingshead

LEADER IN MAINTENANCE CHEMICALS

UNITED STATES RUBBER COMPANY



SERVING THROUGH SCIENCE

Look at its EXTRA DEEP TREAD!

IT MAKES THE U. S. ROYAL FLEET DELIVERY *a mile-saving, money-saving specialist!* That massive tread of the U. S. Royal Fleet Delivery means *plenty* on any kind of delivery service. *It means more mileage. It means longer, better "stop-and-start" service. And it means far lower cost per mile!*

This husky with the special, deeper tread has heavily buttressed sidewalls to guard against damage from curbs. It has the *extra* strength of U. S. Safety Bonded Cord Construction. And today it's built with tough tire rayon to make it more rugged than ever before!

It's a *specialist* at saving miles and money on delivery jobs—the *longer*-running U. S. Fleet Delivery!

GIVES YOU MORE MILES PER TIRE—LESS COST PER MILE!

U.S. ROYAL Fleet Delivery

NOW AT YOUR U. S. TIRE DISTRIBUTOR'S—SEE HIM TODAY!

TWO MORE WAYS TO GET LONGER MILEAGE AT LOWER COST

Butyl Tubes for Better Performance

For every tire there's a U. S. Royal Butyl Tube, assuring less stretch, less thinning out, greater tear resistance, better air retention.

Fleet Service for Extra Miles

By placing all the facilities of the U. S. Fleet Service at your disposal, your U. S. Distributor helps you get more miles from all your tires.

Grey-Rock BALANCED BRAKES mean everything to fleet operators

- SMOOTHER, SAFER STOPS
- DRIVER COMFORT AND SATISFACTION
- MORE TIME ON THE ROAD
- FASTER SCHEDULES
- LONGER LINING AND DRUM LIFE
- LOWER MAINTENANCE COSTS

This is Grey-Rock's answer to one of your major problems. Others will be answered as the series progresses.

Driver comfort and satisfaction

DRIVERS TELL US that nothing wears them down faster . . . or slows up schedules more . . . than unbalanced brakes.

That's why they're so strong for Grey-Rock *Balanced* Brakes!

Give them the confidence they want. Grey-Rock linings are *balanced* so that each shoe does its job in team-work with the others. Results: smooth, positive stops every time!

Protect your investment, in vehicles and drivers, by installing Grey-Rock *balanced* linings and blocks. Your Grey-Rock jobber has them . . . right for the job, ready to use. He will also gladly furnish Grey-Rock service methods, and National Safety Council standards for efficient shop practice.

For unusual conditions, he will arrange a special survey by Grey-Rock engineers, who will give you the benefit of their experience with hundreds of thousands of trucks and buses in the field.

Keep your drivers happy. Bring 'em back fresh as a daisy by providing the smoother, safer stops that come only from Grey-Rock *balanced* linings.

Grey-Rock

BALANCED BRAKE LININGS









UNITED STATES ASBESTOS DIVISION
of Raybestos-Manhattan, Inc.

It's Back! THE GENERAL CD

with all its extra money-earning features BUILT-IN!



Here again is top mileage and extra dependability . . . for high-speed highway operations and strenuous start-stop service.

The precision-engineered and quality-built General CD . . . proved by the cost records of America's leading truck fleets to give more miles per dollar invested . . . more dependable miles per maintenance dollar.

★ ★ ★

Let your General Tire Dealer prove—with your own figures—how much extra the CD can earn in your service.

THE GENERAL TIRE & RUBBER COMPANY
Truck Tire Division • Akron, Ohio

The GENERAL CD

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You get all 3

BANTAM SUPERCARGO TRAILERS



"We are very well satisfied with the Bantam Supercargo Trailer. Both our drivers and shippers are pleased with its outstanding features."
W. L. VANPATTON.

1 **ADVANCED DESIGN.** No old-fashioned, out-of-date ideas carried over from pre-war engineering methods. Gives you better performance and lower maintenance cost.

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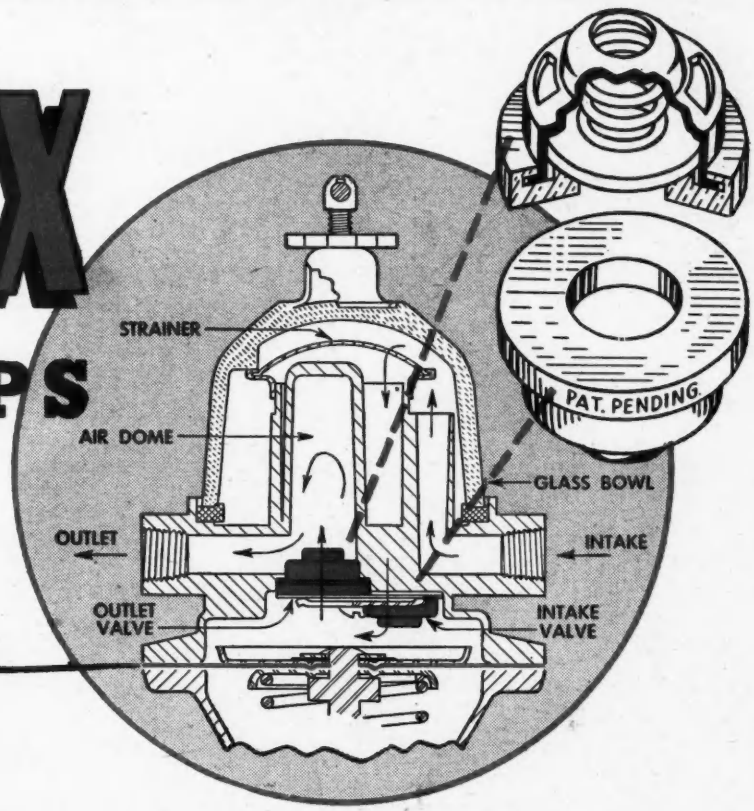
You get all 3 in Supercargo Trailers—advanced design—engineered construction—production-line economy—plus *eighty* distributors and dealers to serve you.

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AMERICAN BANTAM CAR COMPANY, BUTLER, PA.

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INSURE LONGER LEAK-PROOF LIFE

AIRTEX
FUEL PUMPS



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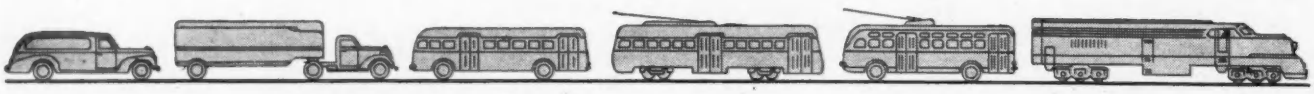
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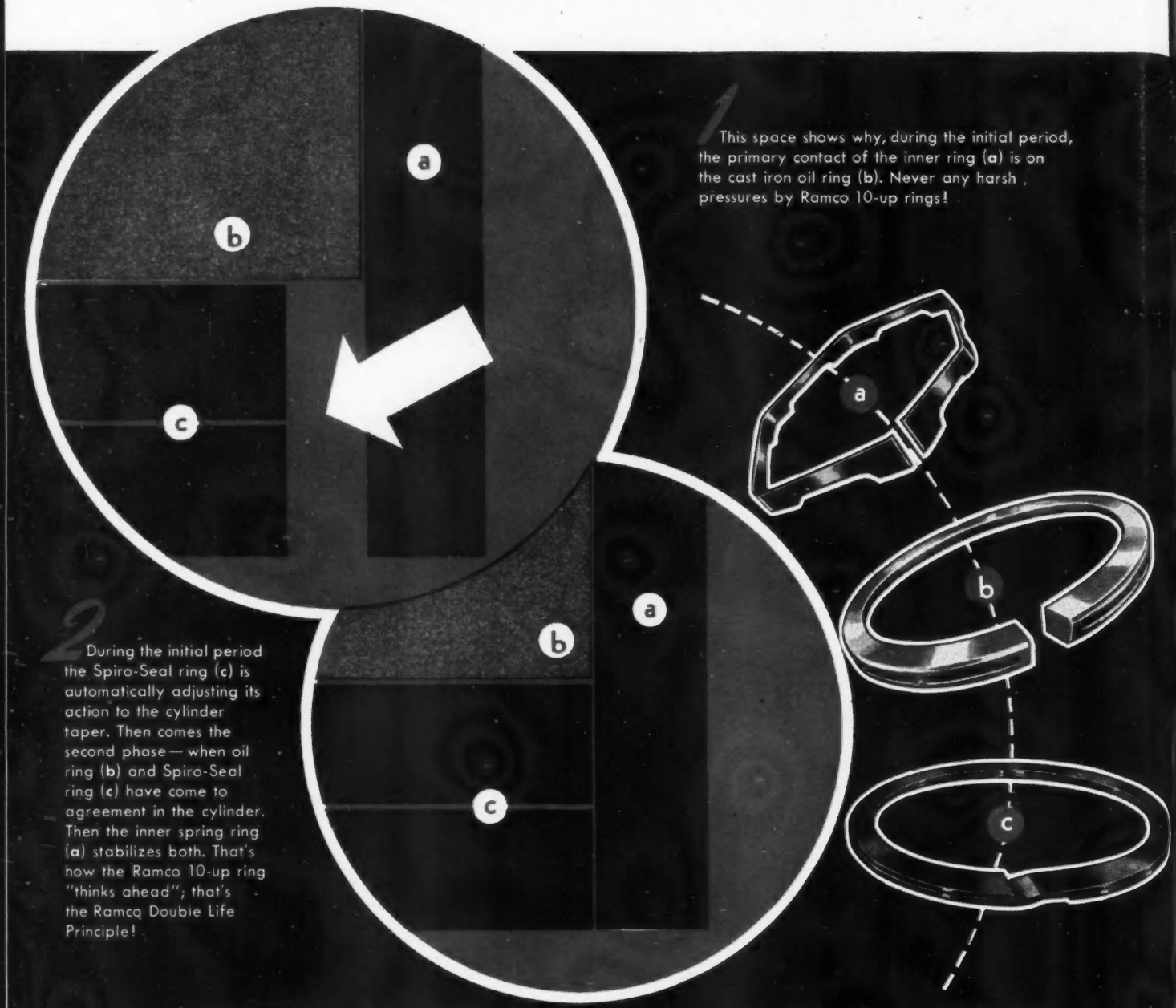
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The RING THAT *"THINKS AHEAD"*



1 This space shows why, during the initial period, the primary contact of the inner ring (a) is on the cast iron oil ring (b). Never any harsh pressures by Ramco 10-up rings!

2 During the initial period the Spiro-Seal ring (c) is automatically adjusting its action to the cylinder taper. Then comes the second phase — when oil ring (b) and Spiro-Seal ring (c) have come to agreement in the cylinder. Then the inner spring ring (a) stabilizes both. That's how the Ramco 10-up ring "thinks ahead"; that's the Ramco Double Life Principle!

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To do the job right, a ring should satisfy two entirely different sets of conditions . . . first, during the wear-in period, second, during the long run. Ramco 10-up does exactly that because it is built not only to stop oil pumping and blow-by during the initial period, but also to "think ahead" to the second phase of ring life. Thus the Ramco 10-up ring is *two* different things at the two different times. That's the Ramco Double Life Principle—an important reason why you do the job right when you use Ramco 10-up Piston Rings for every job, re-ring or re-bore! . . . Ramsey Corporation, 3710 Forest Park Blvd., St. Louis, Mo. Factories: St. Louis; Fruitport, Mich.; Toronto, Canada.

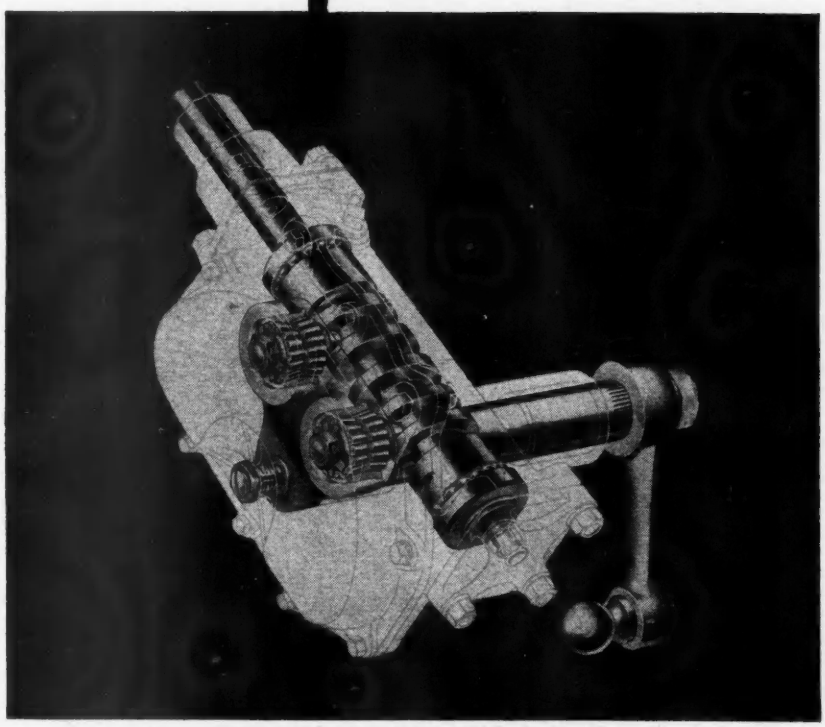
RAMCO *10 up* RE-POWER *Ring*

IDEAL FOR ALL TRUCK AND FLEET RE-POWERING JOBS . . . . RE-BORE OR RE-RING!

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● For 41 years Ross has anticipated and met the changing and increasing needs of automotive operation, with constantly improved steering gear designs. Based on the Ross exclusive Cam and Lever principle, there have been continuously many important refinements and perfections.

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CUMMINS DIESELS

SINCE 1919...PIONEER OF PROFITABLE POWER THROUGH HIGH SPEED DIESELS

Efficient POWER



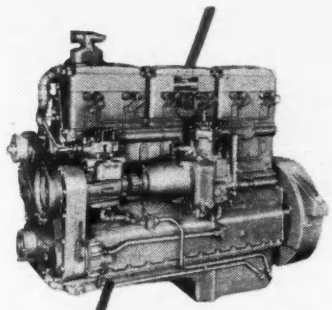
Low weight per horsepower . . . smooth operation over a wide range of engine speeds . . . simple design for easy servicing . . . these are reasons for the dependable, low cost performance that makes Cummins efficient power source





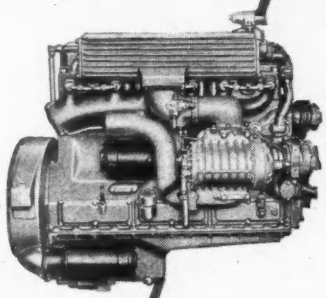
Dependable Diesels the most in the 84 to 275 hp range.

CUMMINS ENGINE COMPANY, INC., COLUMBUS, INDIANA

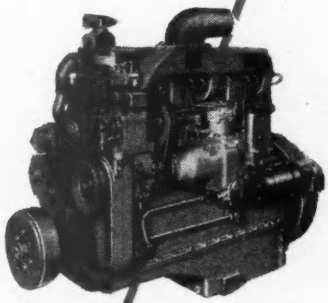


HB-600

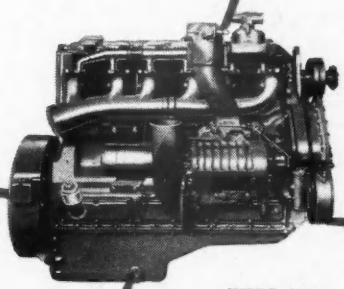
FASTER SCHEDULES
on the longest hauls



HBS-600



NHB-600



NHBS-600

Cummins Dependable Diesels . . . choice of leading makers of heavy-duty on-highway trucks as original power . . . assure you faster schedules on the longest hauls . . . over the toughest routes. Dependable performance . . . flexibility of operation . . . low fuel and maintenance costs are some of the factors that have given Cummins Dependable Diesels their reputation of being Efficient Power. Hundreds of cost-conscious fleet operators from coast to coast have found that Cummins Dependable Diesels have ample power to assure the higher average speeds that mean increased profit. No other diesel engine can match the proved records of performance established by Cummins Dependable Diesels in heavy-duty trucking.

CUMMINS ENGINE COMPANY, INC.

Columbus, Indiana

CUMMINS Dependable DIESELS

SINCE 1919 ..PIONEER OF PROFITABLE POWER THROUGH HIGH SPEED DIESELS

SPECIFICATIONS

Model	Bore and Stroke	Piston Disp. (Cu. In.)	Maximum Rating (H.P. and R.P.M.)	Net Weight* (Lbs.)	Dimensions* (Inches)
HB-600	4⅞ x 6	672	150 @ 1800	2165	57 x 30 x 46
HBS-600	4⅞ x 6	672	200 @ 1800	2580	58 x 31 x 46
NHB-600	5⅛ x 6	743	200 @ 2100	2500	61 x 29 x 48
NHBS-600	5⅛ x 6	743	275 @ 2100	2850	60 x 32 x 49

**Approximate weights and dimensions.*

Use postage-paid card inserted at page 103 for free information on advertised products

Accurate to a



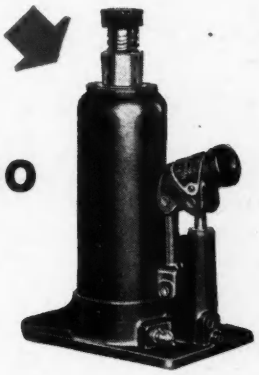
Walker **KNOW-HOW**—*a typical example*

The accuracy of the outside diameter of this TANK NUT is rigidly held to within 3 thousandths of an inch.* And the concentricity of the inside threads and the outside diameter to within 4 thousandths. This insures a perfect line-up of the parts which the Tank Nut "ties" together. Result: a leak-tight, "load-fast," dependable jack.

** To answer your question, a cat's whisker IS three thousandths of an inch.*

WALKER

cat's whisker



WALKER *KNOW-HOW* MAKES SERIES 900 LEAK-TIGHT AND "LOAD-FAST"

● To be any good to anyone, a jack must be more than a load *lifter*. It's got to be a load *holder*, too.

When the alignment of hydraulic jack parts is sloppy, the oil is bound to leak out under the terrifically high pressures needed for its operation. True, the jack may raise a load, but it can't hold it. Slowly, but surely, the ram goes down, load and all.

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WALKER MANUFACTURING COMPANY OF WISCONSIN • RACINE, WISCONSIN

Also Makers of Exhaust Silencers and Electric Lifts

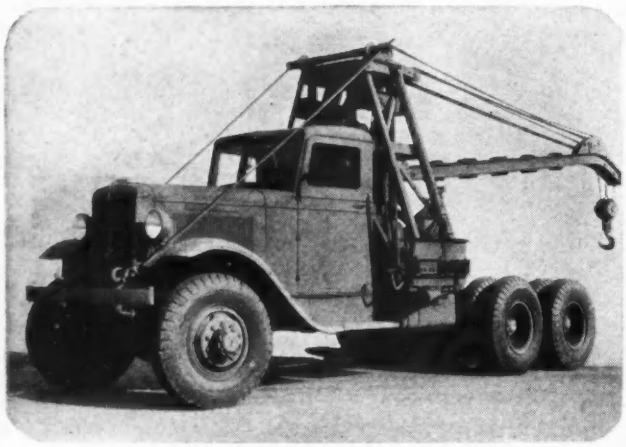
The Famous Walker Series 900 Portable Hydraulic Jacks *from 1½ to 50 Tons Capacity*

LEADS IN JACKS

NO OTHER TRUCKS EQUAL

ALL·WHEEL·DRIVE

For All-Around, Year-Around Commercial Work





No hill too steep—no sand too deep—no going too rough and rugged . . . that's the story wherever you find Marmon-Herrington *All-Wheel-Drive* Trucks at work.

Marmon-Herrington *All-Wheel-Drive Trucks* are "made to order" for tough commercial jobs. Here are trucks with virtually the tractive power of crawler tractors—yet many times as versatile and fast. Here are trucks you can depend on to carry men, materials, equipment—*where you want them, when you want them . . . swiftly, safely, surely.*

Marmon-Herrington Heavy-Duty *All-Wheel-Drive* Trucks are available in 4-wheel-drive and 6-wheel-drive models—rated gross capacities up to 42,000 lbs. Converted Fords are available in all standard models, both 4-wheel-drive and 6-wheel-drive—capacities up to 22,500 lbs.

Discover how these great all-year, all-weather, all-purpose trucks speed operations, lower costs and increase profits. See your near-by Marmon-Herrington dealer, or write for literature.

MARMON-HERRINGTON COMPANY, INC.
INDIANAPOLIS 7, INDIANA

Top: Marmon-Herrington Heavy-Duty *All-Wheel-Drive* Truck.

Bottom: Marmon-Herrington *All-Wheel-Drive* Converted Ford.



MARMON-HERRINGTON

COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance

Reg. U. S. Pat. Off. Published monthly Member C.C.A.
Acceptance under the Act of June 5, 1934, authorized December 18, 1934

Vol. LXXIII Philadelphia, April, 1947 No. 2

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SUBSCRIPTION RATES: United States and United States Possessions and all Latin-American countries—$5.00 per year. Canada and Foreign—$10.00 per year. Single copies—50 cents. April issue, $1.00.

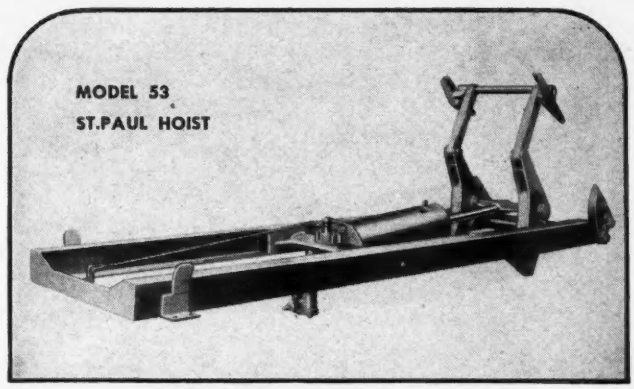
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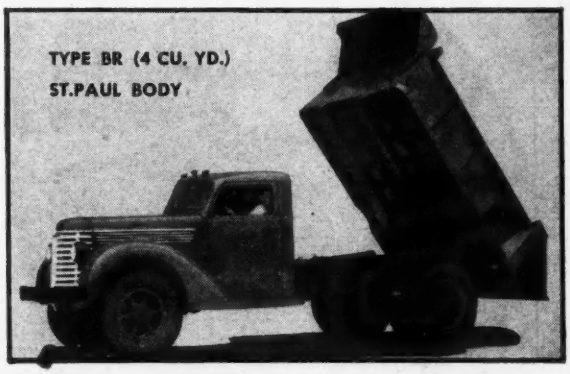
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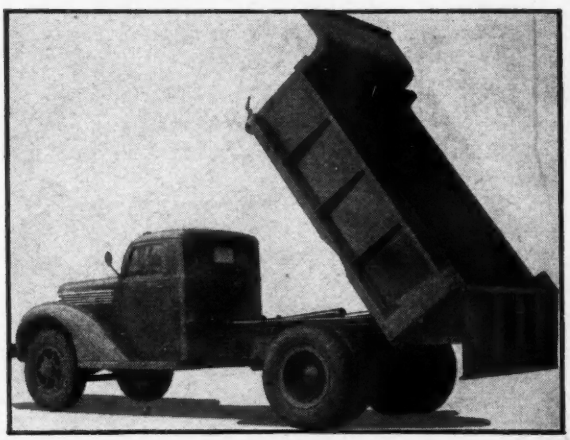
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Put a **St.Paul** Hoist



and Dump Body
on any good truck. . . .



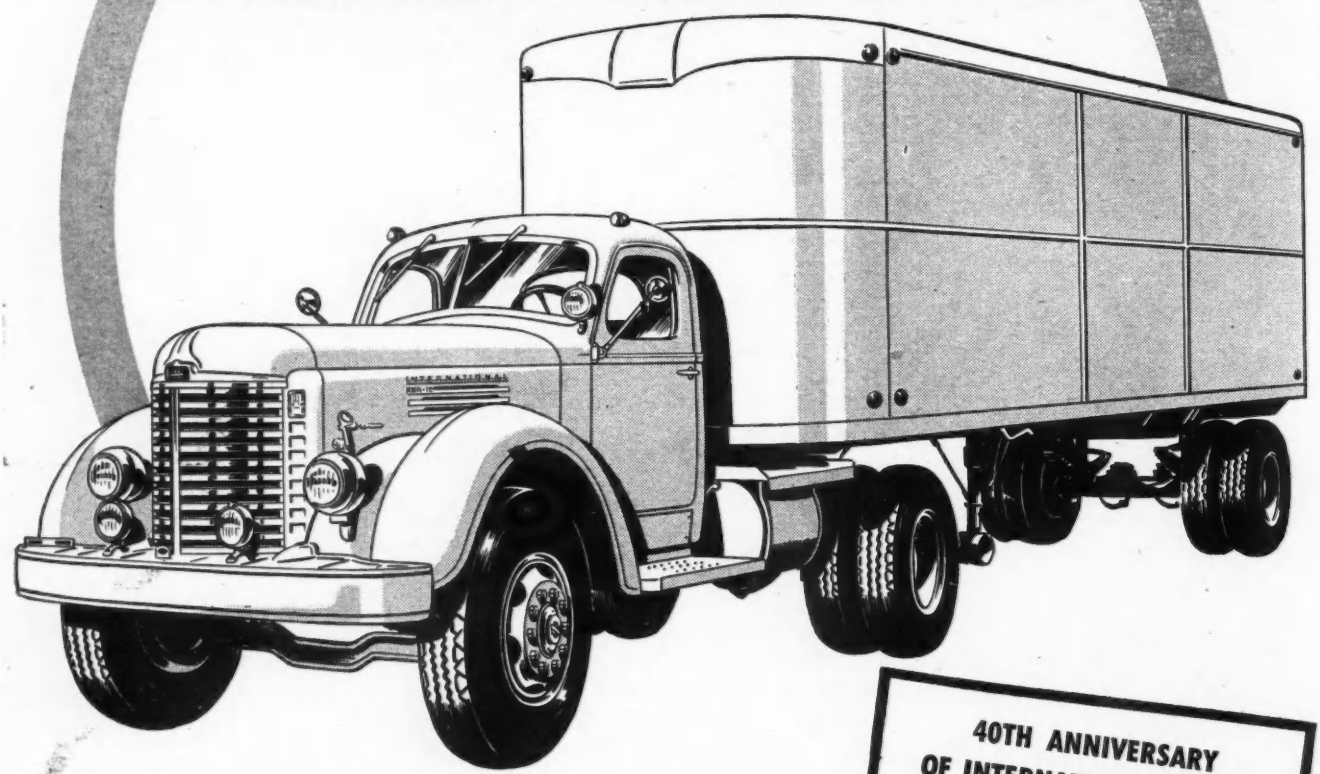
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Real Dump Unit. . . .

Reliable, fast and strong!

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2207 University Avenue S. E.
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NEW INTERNATIONAL TRUCKS

FOR EVERY TRANSPORT JOB



40TH ANNIVERSARY OF INTERNATIONAL TRUCKS

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And how the new Internationals do their jobs! With what economy, long, trouble-free service and ease of operation! They're the finest values in 40 years of International Truck history, and International Truck values are so outstanding that for the last 16 years more heavy-duty Internationals have served American commerce and industry than any other make.

New Internationals display brilliant styling that sets new standards for the truck industry. Throughout the 15 basic models numerous features and improvements have been incorporated, all contributing to even greater truck performance.

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Motor Truck Division
INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue Chicago 1, Illinois

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NBC Network. See newspaper for time and station.

INTERNATIONAL

INTERNATIONAL *Trucks*

COMMERCIAL CAR JOURNAL
Vol. LXXIII APRIL 1947 No. 2

1947 FLEET OPERATORS' REFERENCE ANNUAL



THIS is the Eleventh Edition of The Fleet Operators' Reference Annual—the largest issue of Commercial Car Journal ever published. More important, from the fleet operator's angle, are the several innovations designed to make the issue more interesting and more valuable. Maintenance data, regulatory charts and industry statistics are all authentic and up to date. The maintenance material is presented in a new form for handier reference. The editors wish to acknowledge the aid of factory service men.

SECTION I

SERVICE DATA

Tune-Up Data, Front-End Alignment Specifications, Tension Specifications, Valve Spring Lengths and Pressures, Engine and Chassis Lubricant Specifications and Capacities, Cooling System Capacities, and Battery Data are grouped according to the particular make of truck upon which such service work is to be done. An index of truck makes is given below.

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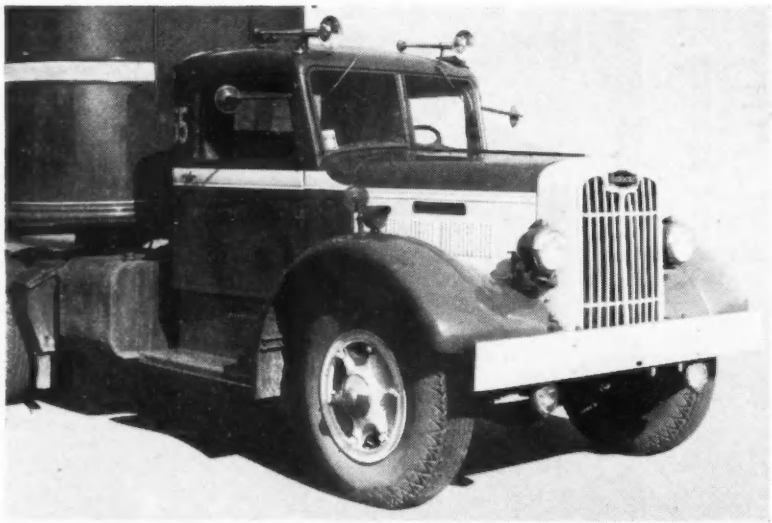
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ALSO . . .

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AUTOCAR

Service specifications for C50, U50, C70, U70, C90, U90 and DC100 series (1945, 1946, 1947)



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
C50, C50T, U50, U50T (1945-47)	10	14	20	27
C50D (1946-47)	10	14	20	27
C5064 (1946-47)	10	14	12 ea	27
C70, C70T (1945-47)	12	18	20	34
U70, U70T (1945-47)	12	18	20	38
C70S, C70TS (1945-47)	12	18	18	33
U70S, U70TS (1945-47)	12	18	18	38
C70D (1946-47)	12	18	20	34
C70DS (1946-47)	12	18*	18	33
C7064 (1946-47)	12	18	12 ea	34
C90 (1945-47)	12	18*	18	33
C90T (1945-47)	12	18	18	33
U90, U90T (1945-47)	12	18	18	38
C90D (1946-47)	12	18	18	33
C9064 (1946-47)	12	18	20 ea	33
DC100, DC100T, DC100D (1945-47)	20	18*	18	40
DC100N, DC100TN, DC100DN (1946-47)	28	18*	18	40
DC10064 (1945-47)	20	18*	14 ea	40
DC10064S (1945-47)	20	18*	20 ea	40
DC10064SN (1946-47)	28	18*	14 ea	40

*Auxiliary Transmission 12 pints.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
All gasoline models (1945-47)	135*	17	Pos
All diesel models (1945-47)	155**	23	Pos

*—2 Batteries; **—4 Batteries.

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
All Models with 377, 447, 501 engines	80–85	130–140	85–90
All Models with HB600 diesels	430–450	310–330	105–115

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
50 Series (1945-47)	Own 377	6–4x5	40–2400	11°B	4B	.....	.018	.021	.....	8 COM	18mm	.025	C	6°B	2B	100
70 Series (1945-46)	Own 447	6–4¼x5¼	40–2400	11°B	4B	.....	.018	.021	.....	8 COM	18mm	.025	C	6°B	2B	95
70 Series (Note A) (1946-47)	Own 447	6–4¼x5¼	40–2400	16°B	6B	.....	.018	.021	.....	8 COM	18mm	.025	C	6°B	2B	105
70S Series (1945-46)	Own 501	6–4½x5¼	40–2400	11°B	4B	.....	.018	.021	.....	8 COM	18mm	.025	C	6°B	2B	95
70S Series (Note B) (1946-47)	Own 501	6–4½x5¼	40–2400	16°B	6B	.....	.018	.021	.....	8 COM	18mm	.025	C	6°B	2B	105
90 Series (1945-46)	Own 501	6–4½x5¼	40–2400	11°B	4B	.....	.018	.021	.....	8 COM	18mm	.025	C	6°B	2B	95
90 Series (Note C) (1946-47)	Own 501	6–4½x5¼	40–2400	16°B	6B	.....	.018	.021	.....	8 COM	18mm	.025	C	6°B	2B	105
D100 Series (1945-47)	Cum HB600	6–4⅞x6	40–1800	5°B	.....	.....	.014	.022	Diesel							525
D100N Series (1946-47)	Cum NHB600	6–5⅛x6	40–2100	.....	.....	.....	.017	.027	Diesel							500

Note A—Beginning with Engine No. 45-4541 Note B—Beginning with Engine No. 60-5561 C—.018—.024

VALVE SPRINGS

MODEL	VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Length Inches	Valve Closed: Pressure (Ave.) Pounds	Length Inches
377 (1945-47)	110	2 5/32	76	2 9/16
447, 501 (1945-46)	110	2 5/32	76	2 9/16
*447, *501 (1946-47)	132	2 1/64	69	2 9/16
Cum HB600 (1945-47)	136	3 19/32†	87	3 19/32†
Cum NHB600 (1945-47)	102	3 1/4†	72	3 1/4†

*—Beginning with 447 engine No. 45-4541 and 501 engine No. 60-5561.
†—Free length.

FRONT END

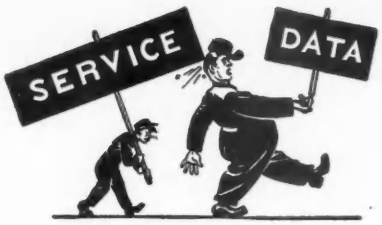
MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In deg.)
C50, C70, C70S, C90 (1945-47)	0–1/4	1	N1–1P	8
C50D, C5064, C70D, C70DS, C90D (1946-47)	0–1/4	1	N1–1P	8
C7064, C9064 (1946-47)	0–1/4	1	N1–1P	8
C50T (1945-47)	0–1/4	1	0–2P	8
C70T, C70TS, C90T (1945-47)	0–1/4	1	0–2P	8
U50, U50T, U70, U70T, U70S, U70TS, U90 (1945-47)	0–1/4	1	N1½–1½P	8
DC100, DC100T (1945-47)	0–1/4	1	0–2P	8
DC100D, DC10064S (1945-47)	0–1/4	1	N1–1P	8
DC10064 (1945-47)	0–1/4	1	0–2P	8
DC100TN, DC10064N (1946-47)	0–1/4	1	0–2P	8
DC10064SN (1946-47)	0–1/4	1	0–2P	8

N—Negative P—Positive

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
All models (1945-47)	(S)30	(M)20	(W)10	140	90	140	90	140	90	140-90

S—Summer M—Mild W—Winter



BROCKWAY

Service data for 1947 models 88WH, 128W, 146W, 152W, 154W, 154WH, 240XW, 260XL, 260XW

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
88W (1944-45)	5	6	12	21
88WH (1945-47)	7	12	15	25
128W (1947)	7	12	20	25
146W (1947)	7a	12	31	25
152W (1947)	8a	16	31c	32
154W (1947)	8a	16	31c	30
154WH (1947)	14b	18	30c	40
240XW (1947)	14b	18	30c	40
260XW, 260XL, 260XWL (1947)	14b	18	34d	40

a—When oil filter is drained add 1 extra qt.
b—When oil filter is drained add 4 extra qts.
c—With 2-speed axle—18 pt.
d—With 2-speed axle—32 pt.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
88WH, 128W, 146W, 152W, 154W	110	17	Pos
154WH, 240XW, 260XL	152	19	Pos
260XW, 260XWL	110*	17	Pos

*—2 Batteries

TENSIONS

ENGINE MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
All Models	See CONTINENTAL, page 56		



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
88W (1944-45)	Con 25B	6-3 7/16x4 3/8	40-2000	5°B	1 1/2B	.0175	.017C	.022C	Ch	6 COM	18mm	.025	.020	6°B		
88WH (1945-47)	Con 38B	6-3 3/4x4 3/8	40-2000	6 1/2°B	2 1/4B	.022	.017C	.022C	Ch	7 COM	18mm	.025	.020	6°B		
128W (1947) 146W (1944-47)	Con 40B	6-4x4 3/8	40-2000	6 1/2°B	2 1/4B	.022	.017C	.022C	Ch	7 COM	18mm	.025	.020	6°B		
152W, 154W (1944-47)	Con 42BX	6-4 5/16x4 7/8	55-2500	16°B	6B	.022	.017C	.022C	Ch	7 COM	18mm	.025	.020	6°B		
154WH (1946-47) 240XW, 260XL (1947)	Con 46B	6-4 1/2x5 3/8	55-2500	17°B	6 1/2B	.024	.022C	.022C	Ch	5 COM	18mm	.025	.020	6°B		
260XW (1944-47), 260XWL (1947)	Con 48B	6-4 3/4x5 3/8	55-2500	17°B	6 1/2B	.024	.022C	.022C	Ch	5 COM	18mm	.025	.020	5°B		

C—Cold

VALVE SPRINGS

MODEL	VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Length Inches	Valve Closed: Pressure (Ave.) Pounds	Length Inches
88W, 88WH, 128W, 146W (1944-47)	110-118	1.52	53-59	1 7/8
152W, 154W (1944-47) O.	110-118	1.52	53-59	1 7/8
I.	28-32	1 11/64	11.3-14.3	1 17/32
154WH, 240XW, 260XW, 260XL, O.	160-170	1 3/4	67-73	2 1/4
260XWL (1944-47) I.	82-88	1 3/4	33-37	2 1/4

O—Outer. I—Inner.

FRONT END

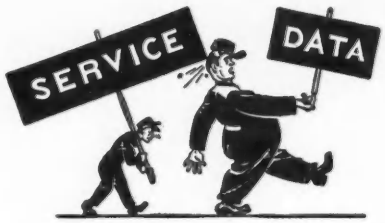
MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
88W, 88WH, 128W, 146W, 154W, 154WH, 260XL, 260XWL	1/16-1/8	1	1-2	8
152W, 240XW, 260XW	1/16-1/8	2	1-2	0

LUBRICATION

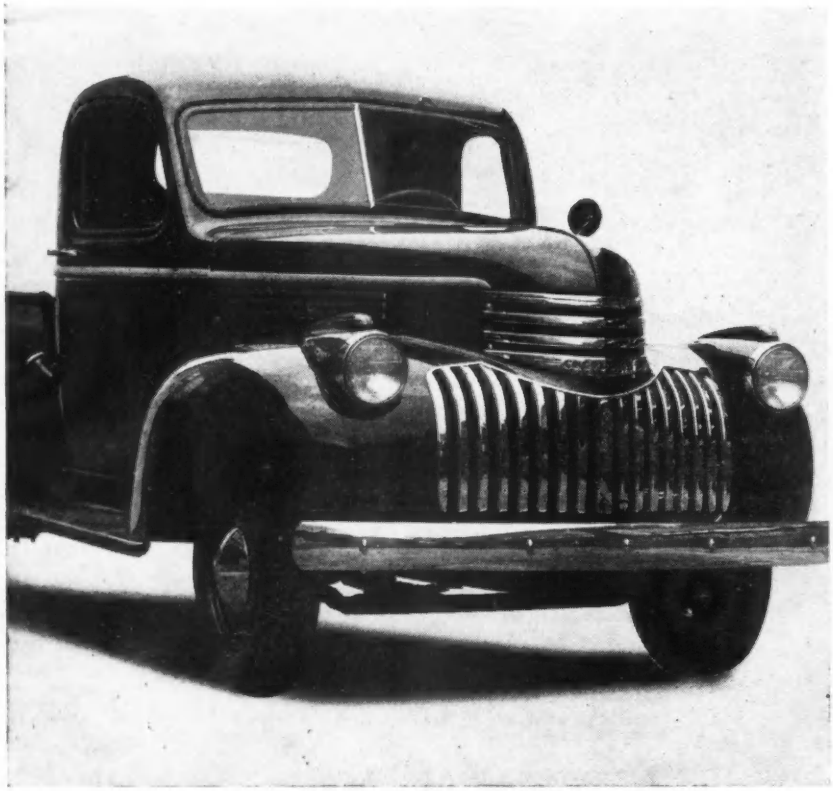
MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
88W, 88WH, 128W, 146W, 152W, 154W (1944-47)	40 above 32°	30 below 32°		90EP	90EP	90EP	90EP	160	110	140
154WH, 240WX, 260XW, 260XL, 260XWL (1944-47)	30 above 32°	30 below 32°		90EP	90EP	90EP	90EP	160	110	140

EP—Extreme pressure lube

CHEVROLET



Service specifications covering ½, ¾, 1 and 1½-ton models (1941-46) and 2-ton model (1946)



CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
½-Ton (1945-46)	5	1¼	4½	14
1½-Ton (1944-46)	5	5½	11a	16
2-Ton (1946)	5	5½	12	16

a—Heavy-duty and 2-speed axles—14 pt

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
All Trucks (1940-46)	100	15	Neg

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
(1940-46)	75- 80	100-110	40-45

NOTE: Spark plug tensions: AC-104-10mm.: 12-15

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC A-After B-Before	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
½, ¾, 1, 1½ Ton (1941-46) (216.5 cu. in.)	Own	6-3½x3¾	14-2000	3°B	1⅛B	.006	.006	.013	AC	104	10mm	.040	.018	5°B	2B	110*
1½ Ton (1941-46), 2 Ton (1946) (235.5 cu. in.)	Own	6-3 9/16x3 15/16	14-2000	3°B	1⅛B	.006	.006	.013	AC	104	10mm	.040	.018	5°B	2B	110*

*—Minimum.

VALVE SPRINGS

MODEL	VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Length Inches	Valve Closed: Pressure (Ave.) Pounds	Length Inches
All models (except 2-ton) (1941-46)	128	1½	55	1 13/16
All trucks 2-ton (1946)	132	1½	58	1 13/16

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
½-Ton (1935-46)	1/16-1/8	1/4-1 1/4	1 1/4-2 1/4	7 1/4*
1½-Ton (1935-46)	1/16-1/8	1/4-1 1/4	2 1/4-3 1/4	7 1/4*
1½-Ton COE (1940-42)	1/16-1/8	1/4-1 1/4	2 1/4-3 1/4	8*
2-Ton COE (1946)	1/16-1/8	1/4-1 1/4	2 1/4-3 1/4	8*
2-Ton (1946)	1/16-1/8	1/4-1 1/4	2 1/4-3 1/4	7 1/4*

*—± 1 degree

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
All models (1940-46)	20 or 20W above 32°	20W@10° to 32°	10W@-10° to 10°*	90	90	90Hyp	90Hyp	.....	.....	90

*—10% kerosene below -10° Hyp—Truck-type hypoid lube

CORBITT

Service data for models 18BG, 18TG, 22BG, 22FG, 22TG, 22TD, 25BG, 25TG, 25TD, 27TD, 28TG, 28TD

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
18BG	9	11	22	28
22BG	10	16	33	30
25BG	10	16	36	35
22FG	10	16	8	30
18TG	9	11	22	28
22TG	10	16	33	35
25TG	18	24	36	47
28TG	18	24	30	53½
22TD	19	16	33	....
25TD	17	24	38	....
27TD	24	29	36	39
28TD	32	29	30	44

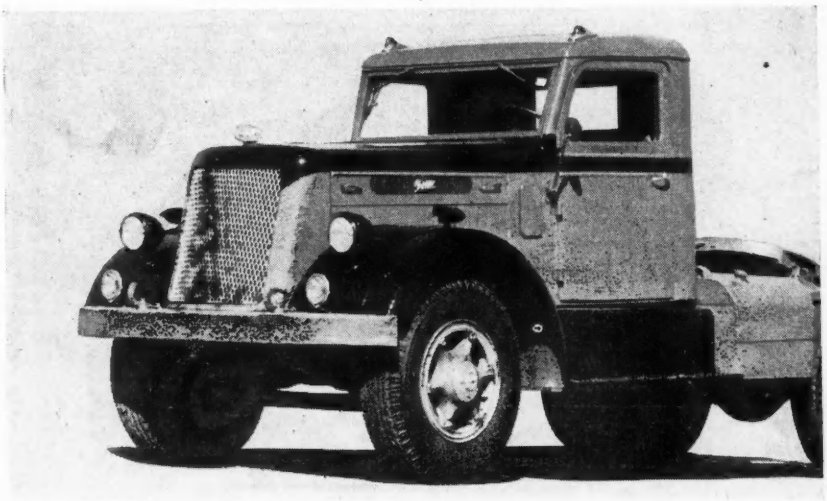
BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
18BG, 18TG, 22BG, 22TG, 25BG	100*	13	Pos
25TG, 28TG	135*	19	Pos
22TD, 25TD, 27TD, 28TD	200**	25	Pos
22FG	135**	19	Pos

*—2 Batteries; **—4 Batteries.

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
18BG, 18TG, 22BG, 22FG, 22TG, 25BG, 25TG 28TG	See CONTINENTAL, page 56		
22TD	158	175	158
25TD	⅜"-175 1"-280	175	158
27TD, 28TD	430-450	310-330	105-115



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

TUNE UP

MODEL	Standard Engine Make and Model **	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make.	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
18BG, 18TG	Con M6330	6-4x4½	40-50-50	6½°B	.....	.022a	.022a	.022ab	Ac	84	18mm	C	.020	6°B	.....	108
22BG, 22FG	Con B6371	6-4½x4⅝	40-50-50	6½°B	.....	.022	.017	.025b	Ac	85	18mm	C	.020	6°B	.....	123
22TG, 25BG	Con B6427	6-4⅝x4⅞	40-50-50	6½°B	.....	.022	.017	.018b	Ac	84	18mm	C	.020	7°B	.....	124
25TG	Con R6513	6-4½x5½	50-60-60	17°B	.....	.0245	.020	.020b	Ac	84	18mm	C	.020	5°B	.....	120
28TG	Con R6602	6-4½x5½	50-60-60	17°B	.....	.0245	.020	.020b	Ac	84	18mm	C	.020	5°B	.....	120
22TD	Her DWXD	6-4¼x4¼	50-2600	26°B	.....	.....	.....	.....			Diesel					....
25TD	Her DRXC	6-4⅝-5¼	30-1200	12°B	.....	.016	.016	.016b			Diesel					475
27TD	Cum HB600	6-4½x6	30-40-1600	5°B	.....	.014	.014	.022b			Diesel					525
28TD	Cum NHB600	6-5½x6	30-40-2000	20°B	.....	.009	.009	.027b			Diesel					525

a—With Roto valves, set at .018 b—With Stellite valves, increase .003 C—.018—.020

VALVE SPRINGS

MODEL	VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Length Inches	Valve Closed: Pressure (Ave.) Pounds	Length Inches
18BG, 18TG	111-118	1.521	53-59	1⅞
22BG, 22FG, 22TG, 25BG O.	102-110	1.521	53-59	1⅞
I.	28-32	1¹¹⁄₁₆	11.3-14.3	1¹⁷⁄₃₂
25TG, 28TG O.	160-170	1.75	67-73	2.25
I.	82-88	1.75	33-37	2.25
22TD	.....	.....	.....	.....
25TD O.	48	1.449	27	1.844
I.	30	1.355	17	1.75
27TD	129-143	.....	83-91	3¹⁹⁄₃₂†
28TD	102	.....	72	3¼†

†—Free length. I—Inner. O—Outer.

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
All 2-Wheel Drive (1945-47)	1/16-¼	1	2-3½	8
All Front Wheel Drive (1945-47)	⅛-¼	0	5-7	0

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
All diesels (1947)	40 above 90°	30 above 32°	20 below 32°	140	90	140	90	140	140	140
All gasoline models (1947)	50 above 90°	40 above 32°	30 below 32°	140	90	140	90	140	140	140

DIAMOND T

Service specifications for 1947 models 201, 201C, 306, 404, 404SC, 509, 509SC, 509C, 614, 614C, 702, 703, 806, 806C, 809, 900, 901, 910



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

TENSIONS: *See HERCULES, CONTINENTAL, CUMMINS, p. 56.*

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
201 (1947)	6	4½	6	16
201C (1947)	6	4½	8	18
306 (1947)	9	4½	8a	17
404 (1947)	9	4½	9a	23
404SC (1947)	9	4½	8ab	26
509 (1947)	9	4½c	9ad	23
509SC (1947)	9	4½	9a	26
509C (1947)	9	4½	13	24
814 (1947)	9	12	36e	22
614C (1947)	9	12	20	23
702 (1947)	8	20	20	43
703 (1947)	10	20	20	42
806 (1947)	8	11f	38g	43
806C (1947)	10	20	16	28
809 (1947)	10	20f	22hi	44
900 (1947)	14	11jk	38gm	44
901 (1947)	18	15j	38ilm	54
910 (1947)	20	26j	38ln	53

a—Eaton 1350, axle–13 pt. b—Clark R-950, trans.–9 pt.
c— Clark 205V trans.–12 pt. d—Eaton 16500 axle–17 pt.
e—With Eaton 18500 axle—20 pt. f—Aux. Trans.–8 pt.
g—With Eaton 20500 axle—22 pt
h—With Timken U-200-P axle or S200-P—38 pt.
i—With Timken U-300 axle–40 pt. j—Aux. trans.–13 pt.
k—With Clark 326V0 trans.—24 pt.
l—With Timken SW-3012 axle—17 pt.
m—With Timken SD3010 axle—14 pt.
n—With Timken SD462-W or SW-456-W—20 pt.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
201, 201C, 306, 404, 404SC	100	a	Pos
509, 509SC, 614, 703	155	19	Pos
509C, 614C	160	b	Pos
702, 806	152	19	Pos
809, 901, 910	168	c	Pos
900	200	25	Pos

a—SAE No. M; b—SAE No. 7B; c—SAE No. 5H.

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
201, 201C	Her QXD-3	6-3 7/16x4 1/2	25–40	5°A		.006	.008	.010	Ch	J10COM	14mm	.027	.020	TC		
306	Her QXLD	6-3 7/16x4 1/4	25–40	5°B			.008	.010	Ch	J10COM	14mm	.027	.020	TC		
404, 404SC	Her JXE-3	6-3 1/2x4 1/4	25–40	5°B			.008	.010	Ch	J10COM	14mm	.027	.020	TC		
509	Her JXB	6-3 5/8x4 1/4	25–40	5°B			.008	.010	Ch	J10COM	14mm	.027	.020	TC		
509, 509C, 509SC	Her JXC	6-3 3/4x4 1/4	25–40	5°B			.008	.010	Ch	J10COM	14mm	.027	.020	TC		
509, 614, 614C	Her JXD	6-4x4 1/4	25–40	5°B			.008	.010	Ch	J10COM	14mm	.027	.020	TC		
614	Her JXLD	6-4x4 1/2	25–40	5°B			.010	.010	Ch	J10COM	14mm	.027	.020	TC		
702, 806	Her WXLD	6-4 1/4x4 3/4	25–40	5°B			.012	.016	Ch	J10COM	14mm	.027	.020	D		
703	Con T6371	6-4 1/8x4 5/8	25–40	16°B		.022	.017	.017	Ch	8 COM	14mm	.025	.020	10°B		
703	Con T6427	6-4 5/16x4 7/8	25–40	16°B		.022	.017	.017	Ch	8 COM	14mm	.025	.020	10°B		
806C	Her WXLC-3	6-4 1/4x4 3/4	25–40	5°B			.012	.016	Ch	J10COM	14mm	.027	.020	TC		
809	Con T6427	6-4 5/16x4 7/8	25–40	16°B		.022	.017	.017	Ch	8 COM	14mm	.027	.020	10°B		
900	Her RXLC-3	6-4 5/8x5 1/4	25–40	2°A		.010	.010	.016	Ch	J10COM	14mm	.027	.020	TC		
901	Con R6572	6-4 3/4x5 3/8	50–55	12°B		.024	.020	.020	Ch	5 COM	14mm	.025	.020	12°B		
910	Cum HB-600	6-4 7/8x6					.014	.022			Diesel					

D—½ in. ahead of TC mark on flywheel.

VALVE SPRINGS

ENGINE MODEL	Valve Open: Pressure (Ave.) Pounds	Length Inches	Valve Closed: Pressure (Ave.) Pounds	Length Inches
Her QXD-3, QXB-3, QXLD	48 lb. for	1 in. defl	.	2 1/16–2 5/64†
Her QXC-3	15–18 at	1 31/32 leng	th	1 15/16†
Her JXA, JXE-3, JXB, JXC, JXD	60–65 at	1.594 le	ngth	2 13/16†
Her JXLD	112 at	1.628 le	ngth*	
Her WXLC, WXLD, RXLC, RXLD O.	47½–52½	at 2 33/64 l	ength	3 1/16†
I.	97–107 at	2 5/32 lengt	h	
Con T6427 O.	53–59 at 1	7/8 length		2 3/8†
I.	11½–14½	at 1 17/32 l	ength	1 13/16†
Con R6572 O.	67–73 at 2	1/4 length		2 7/8†
I.	32–38 at 2	1/4 length		2 3/4†
Cum HB600	129–143	2	83–91	2 11/16

†—Free length. I—Inner O—Outer
*—Data shown with 4 active coils; with 5 active coils, 58.6 lb. at 1.984 in length.

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
201	1/8	1	4 2/3	8
201C	1/8	1	1 1/6	8
306	1/8	1	4 2/3	8
404, 404SC, 509, 509SC	1/8	1	1½	8
509C, 614, 614C	1/8	1	1½	8½
702, 703, 806	1/8	1	2½	8
806C	1/8	1	1½	8
809, 900	1/8	1	2½	8
901, 910	1/8	1	1½	8

NOTE: Late 1946 and 1947 Models Only.

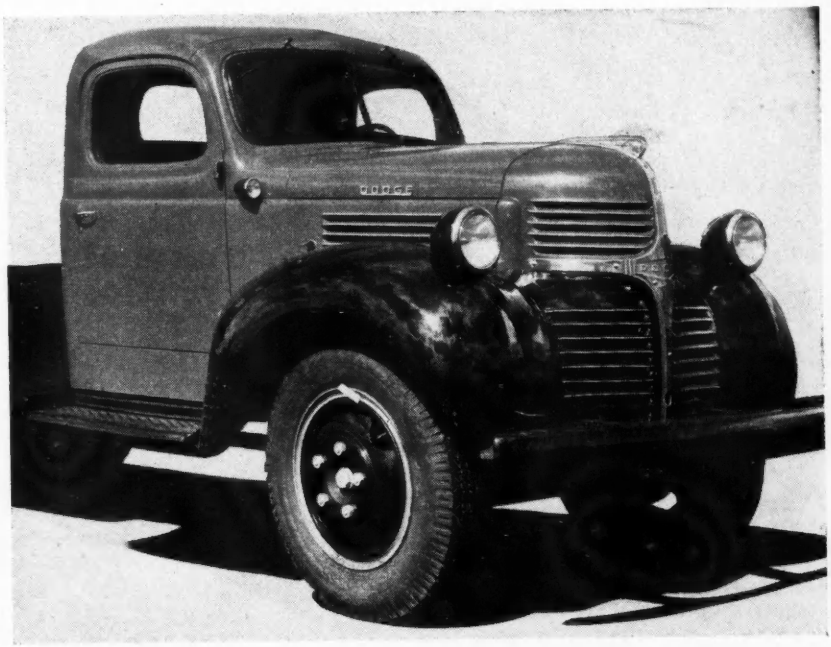
LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
201, 201C, 306, 404, 404SC, 509, 509SC, 614, 614C 702, 806C	40 above 32°	30 below 32°		140	90	A	B	140EP	140EP	140
703, 809	30 above 32°*	20@10° to 32°	20 or 10 below 10°	140	90	A	B	140EP	140EP	140
806, 900, 910	40 above 32°	30 below 32°		50C	50C	A	B	140EP	140EP	140
901	30 above 32°*	20@10° to 32°	20 or 10 below 10°	50	50	A	B	140EP	140EP	140

A—All single-speed axles other than hypoid, 140; all 2-speed axles other than hypoid, 90EP or 140EP above 100°; all hypoid axles, 140Hyp. *—40 above 90°
B—All single-speed axles other than hypoid, 90; all 2-speed axles other than hypoid, 90EP or 140EP above 100°; all hypoid axles, 90Hyp.
C—With 326VO transmission, 90 winter, 140 summer EP—Truck-type extreme pressure lube Hyp—Heavy-duty hypoid lube

DODGE

Service data for WC, WD, WDX, WF, WFM, WG, WGM, WH, WHM, WK and WR series (1946-47)



CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
WC (1946-47)	5	3½	3¾	15½
WD-15 (1946-47)	5	3½	3¾	17
WD-20, WD-21 (1946-47)	5	3½	5½	17
WDX (1946-47)	5	5*	6	17
WF (1946-47)	5	6	11	20½
WFA (1946-47)	5	6	16	20½
WFM (1946-47)	5	6	11	19½
WFMA (1946-47)	5	6	16	19½
WH, WHM, WG, WGM (1946-47)	5	11	10	20½
WHA, WHAX, WHMA, WHMAX (1946-47)	5	11	16	20½
WJ, WJA (1946-47)	8	11	24	28
WK, WR (1946-47)	8	11	36	28
WKA, WRA (1946-47)	8	11	32	28

*Transfer Case—3 pt. Power take-off unit—6 pt.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
WC Series (1946-47)	90	13	Pos
WD Series (1946-47)	95	15	Pos
WF, WFM Series (1946-47)	105	15	Pos
WG, WH, WGM, WHM (1946-47)	119	15	Pos
WJ Series (1946-47)	136	17	Pos
WK, WR (1946-47)	155	19	Pos

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
WC, WD, WDX, WF, WFA, WFM, WFMA, WG, WGM, WH, WHA, WHM, WHMA, WHAX, WHMAX (1946-47)	Nuts 52-57 Cap Screws 65-70	80-85	45-50
WJ, WJA, WK, WKA, WR, WRA (1946-47)	55-60 (Hot)	85-90	50-75

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
WC, WD-15 (1946-47)	Own 218	6-3¼x4⅜	40-800	12°B	5B	.014	.010	.012	AL	A5	14mm	.025	.020	3°B	1⅛B	130
WD-20, WD-21 (1946-47), WDX (1946-47)	Own 230	6-3¼x4⅝	40-800	12°B	5B	.014	.010	.012	AL	A5	14mm	.025	.020	2°A	⅞A	130
WF, WFM (1946-47)	Own 237	6-3 7/16x4¼	40-800	12°B	5B	.014	.010	.012	AL	A5	14mm	.025	.020	TC	.....	130
WG, WGM, WH, WHA, WHAX, WHM, WHMA, WHMAX (1946-47)	Own 251	6-3 7/16x4½	40-800	12°B	5B	.014	.010	.018	AL	A5	14mm	.025	.020	2°A	⅞A	130
WJ (1946-47)	Own 282	6-3¾x4½	50-1000	21°B	9B	.014	.010	.018	AL	A5	14mm	.025	.020	TC	.....	110
WK, WR (1946-47)	Own 331	6-3¾x5	50-1000	21°B	9B	.014	.010	.018	AL	A5	14mm	.025	.020	TC	.....	120

VALVE SPRINGS

MODEL	VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Valve Open: Length Inches	Valve Closed: Pressure (Ave.) Pounds	Valve Closed: Length Inches
WE, WD, WDX, WF, WFM, WFA, WFMA, WH, WNM, WHA, WHMA, WHAX, WHMAX, WG, WGM (1946-47)	111	1⅜	42½	1¾
WJ, WJA, WK, WKA, WR, WRA (1946-47)	108	1⅜	42½	2

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
WC, WD (1946-47)	⅛	1½	2	5½
WDX	0-⅛	N¼-1½P	N½-½P	8
WF (1946-47)	1/16-⅛	2	1½	7
WFM, WH, WHM, WG, WGM, WHA, WHMA, WHAX, WHMAX, WJ (1946-47)	1/16-⅛	2	2	7
WK, WR (1946-47)	1/16-⅛	1	2	8

N—Negative P—Positive

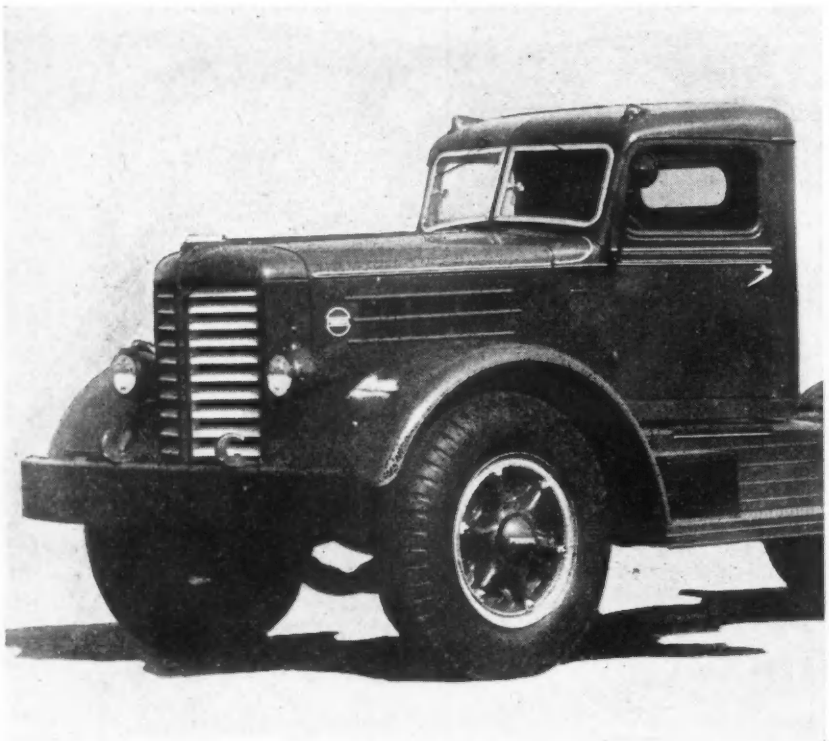
LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
WC, WD, WDX (1946-47)	20 above 32°	20W@10° to 32°	10W below 10°*	140	90a	90Hyp	90Hyp(a)	90	90	140b
WF, WFA, WFM, WFMA, WH, WHA, WHAX, WHM, WHMA, WHMAX, WG, WGM, WJ, WJA, WK, WKA, WR, WRA (1946-47)	30 above 32°	20W@10° to 32°	10W below 10°*	140	90a	90Hyp	90Hyp(a)	90	90	140b

*—Use 10% Kerosene below −10° a—Use 80% 90, 20% 10W or straight 80 gear lube below −10° b—Chassislube Hyp—Truck type hypoid lube

FEDERAL

Service data for 16M, 18M, 29M, 45M, 55M, 60M, 65M, 663M and 664M series (1946-47)



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

CAPACITIES

MODEL	LUBRICANT CAPACITY			Cooling System Capacity, Quarts
	Engine Quarts	Transmission Pints	Rear Axle Pints	
16M	6	4	6	20
18M, 18M2	6	4	8	25
29M, 29M2, 29MA	9	13*	12	25
45M, 45M2	8	20*	16	31
55M, 55MA	8	20*	19	31
60MA, 60M2	10	12**	38	30
65M2, 65MA	14	12**	40	40
663MA, 664MA, 664MAB	14	12**	40	40

*In "MA" models add 10 pts. for aux. trans.
**In "MA" models add 13 pts. for aux. trans.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
16M, 18M, 29M Series (1944-47)	136	17	Pos
45M, 55M, 60M Series (1944-47)	153	19	Pos
65M2, 65MA, 663MA, 664MAB, 664MA (1946-47)	153*	19	Pos

*—2 Batteries

TENSIONS

ENGINE MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
16M, 18M, 29M Series	75	*60 **70	52
45M, 55M, 60M, 65M, 663M, 664M Series	See data under CONTINENTAL, page 56		

*Center and Rear. **Front and Intermediate.

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
16M	Her JXE	6-3½x4¼	40-2500	5°A	.....	.008	.006	.006	AC	44	14mm	.025	.020	10°B	3B	98
18M, 18M2 (1944-47)	Her JXB	6-3⅝x4¼	40-2500	5°B	.....	.008	.008C	.010C	Ch	J10COM	14mm	.025	.020	10°B	3B	98
29M, 29M2, 29MA (1944-47)	Her JXD	6-4x4¼	40-2500	5°B	.....	.008	.008C	.010C	Ch	J10COM	14mm	.025	.020	10°B	3B	98
45M, 45M2, 55M 55MA (1944-47)	Con B6427	6-4⅝x4⅞	55-2600	6½°B	.....	.....	.017	.017	Ch	8 COM	18mm	.025	.020	7°B	.....	98
60MA (1944-47)	Con 22R	6-4½x5¼	30-1000	5½°B	.....	.014	.012	.012	Ch	6 COM	18mm	.025	.020	15°B	.....	.....
65M2, 65MA, 663MA, 664MAB, 664MA	Con R-6602	6-4⅞x5⅜	55-2600	6½°B	.....	.....	.017	.017	Ch	8 COM	18mm	.025	.020	7°B	.....	98

VALVE SPRINGS

ENGINE MODEL		VALVE SPRINGS			
		Valve Open		Valve Closed	
		Pressure (Ave.) Pounds	Length Inches	Pressure (Ave.) Pounds	Length Inches
16M, 18M, 29M Series		52	1 9/16	31	1 13/16
45M, 55M Series	O.	114	1.52	56	1 7/8
	I.	30	1 11/64	12.8	1 17/32
60M Series	O.	110	1 7/8	56 3/4	2 1/4
	I.	50	1 27/32	22 1/2	2 3/32
65M, 663M, 664M Series	O.	160-170	1 3/4	67-73	2 1/4
	I.	82-88	1 3/4	33-37	2 1/4

I—Inner O—Outer

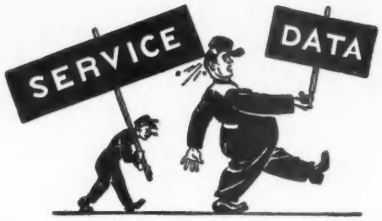
FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees
All Models (1944-47)	1/16	1	3	8

LUBRICATION

MODEL	ENGINE			TRANSMISSION		REAR AXLE		STEERING GEAR		UNIVERSAL JOINT
	Viscosity and Temperature Range			Summer	Winter	Summer	Winter	Summer	Winter	
All models (1944-47)	(N-40, H-50 @50° to 110°)	30 @ 15° to 50°	10W@-20° to 15°	160	90	160	90	.....	.....	160

N—Normal Service H—Heavy Duty



FORD

Service specifications for current 1947 models includes 79 and 7G series with "6" & "8" engines

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
79C	5z	2¾	2½	23
7GC	5z	2¾	2½	17
79D, 69Y	5z	2¾	3	23
7GD	5z	2¾	3	17
79T, 798T, 794T, 79U, 791W, 79W, 798W	5z	5	6†	23
7GT, 7G8T, 7GU	5z	5	6†	17

†With Eaton rear axle—14½ pt.

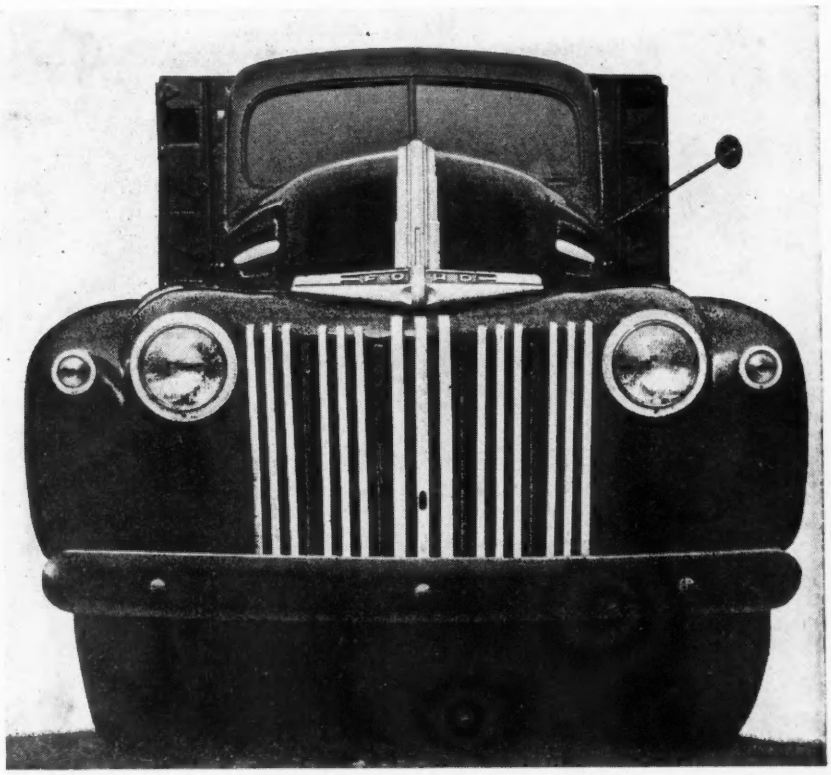
BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
(1940-47)	120	17	Pos

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
100 h.p. "8" aluminum head	40	75	35
100 h.p. "8" iron head	50	75	35

NOTE—Spark Plug Tensions:
14mm, cast iron head—24-28
14mm, aluminum head—20-24



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
All Models (1946-47)	Own-8 cyl	8-3.3x4.4	30-2000	3°B	1B	.021C	D	D	Ch	H9F	14mm	.027	G	2°B	.....	117
All Models (1946-47)	Own-8 cyl	8-3⅝x3¾	45-2000	TC	TC	.015	E	.015C	Ch	H9F	14mm	.027	G	2°B	.....	120

C—Cold D—.013-015 Cold E—.011-.012 Cold F—Heavy duty plug; for light clutch use G—.014-016

VALVE SPRINGS

ENGINE MODEL	VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Length Inches	Valve Closed: Pressure (Ave.) Pounds	Length Inches
90 (6-cyl.), 100 (8-cyl.) (1946-47)	76-80	1.827	37-40	2.13

FRONT END

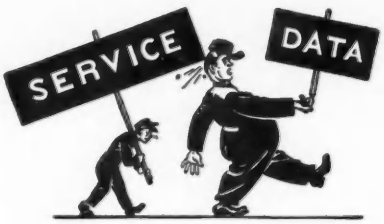
MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KINGPIN SLANT (In degrees)
79C, 7GC (1946-47)	1/16	1	5	8
79D, 7GD, ¾ ton (1946-47)	1/16	¾	3	8
69Y, 8GY, 1-ton (1946-47)	1/16	1	3	8
79T, 7GT, 798T, 7G8T, 794T, 79U, 7GU, 791W, 79W, 798W, 79B, 1½-ton (1946-47)	1/16	¾	3	8¼

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
All models (1941-46)	{40 above 90° / 30 above 32°}	20W@10° to 32°	10W below 10°*	140a	90b	140MEP	90MEP	90	90	140

*—Use 10% kerosene below −10° a—If equipped with steering column shift use 90 b—If equipped with steering column shift use 80 MEP—Mild extreme pressure lube

FWD



Service specifications for current production models

HA, HR, HG, SU, M7, M10 and 1946 model M6x6



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

CAPACITIES

MODEL	LUBRICANT CAPACITY			Cooling System Capacity, Quarts
	Engine Quarts	Transmission Pints	Rear Axle Pints	
HA	10	20a	5ea	26
HR, HG	12	20a	5ea	26
SU	12	24b	8ea	36½
M7, M10, M6X6	20	28c	16ea	45

a—Transfer case—6 pt.
b—Transfer case—16 pt.
c—Transfer case—28 pt.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
HA, HR, HG, SU, M6X6, M7, M10	153*	19	Pos

*—2 Batteries

TENSIONS

ENGINE MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
HA	73–75	88–92	67–69
HR, HG	73–75	96–100	67–69
SU	73–75	129–133	121–125
M7, M10	130–134	242–250	73–75
M6X6	105	*193 **210	263

*Center and Rear. **Front and Intermediate.

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
HA (1942-47)	Wau 6BZ	6-4x4½	40–2500	5°A		.010	.012C	.016C	Ch	7 COM	18mm	.025	.015	23°B		109
HG, HR (1946-47)	Wau 6MZ	6-4¼x4¾	40–2500	8°A		.004	.010C	.018C	Ch	7 COM	18mm	.025	.015	24°B		115
SU (1946-47)	Wau 6SRKR	6-4⅝x5½	40–2250	8°A		.004	.010C	.020C	Ch	1 COM	7/8	.025	.015	18°B		119
M7 (1942-47), M10 (1947)	Wau 6-145GK	6-5¼x6	40–2000	5°A		.006	.014C	.025C	Ch	COM	7/8	.025	.015			120
M6X6 (1944-47)	Her HXE	6-5¾x6	40–2000	5°B		.010	.008C	.014C	Ch	O	7/8	.025	.015	3°B		
M7D, M10D, M6X6D (1944-46)	Cum HB600	6-4⅞x6	55–	5°B		.014	.008C	.010C	Die	sel						

C—Cold

VALVE SPRINGS

MODEL	VALVE SPRINGS			
	Valve Open		Valve Closed	
	Pressure (Ave.) Pounds	Length Inches	Pressure (Ave.) Pounds	Length Inches
HA	101–119	1¾	56–66	2⅛
HG, HR	93–109	1 31/32	59–69	2 11/32
SU	89–99	2 25/64	54–64	2 49/64
M7, M10, M6X6	105–115	3 17/32	65–75	3 29/32

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
HA, HR, HG	⅛	1	2	8
SU	⅛	1½	2	0
M7, M10, M6X6	⅛	0	5	0

LUBRICATION

MODEL	ENGINE Viscosity and Temperature Range			TRANSMISSION		REAR AXLE		STEERING GEAR		UNIVERSAL JOINT
				Summer	Winter	Summer	Winter	Summer	Winter	
HA, HR, HG	(S)L30, H40	(MW)L20, H30	(W)L10W, H20W	140	90	90MEP	80MEP	140	90	140-90
SU, M7, M10, M6x6	(S)L40, H50	(MW)L30, H40	(W)L20W, H30W	140	90	90MEP	80MEP	140	90	140-90

H—Heavy duty L—Light duty MEP—Mild extreme pressure lube S—Summer W—Winter MW—Mild winter

GMC

Service data for 1947 General Motors Truck Models EC, ECS and EF, 100 through 470 and 1946-47 models AC, AF, ACR and AFR 520 through 890



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
EC-100	8*	1¾	4½	15½
EC-150	8*	1¾	6	16
EC-250	8*	6½	6	16
EC-280	8*	6½	11	16
EC-300, EF-300, ECS-300	8*	6½	12½	17
EC-350, EF-350	8*	6½	13½	18
ECS-370	8*	13	13½	18
EF-400, EF-450	8*	13	10	18
EC-400-450, ECS-450	8*	13	10	18
EC-470, EF-470	8*	13	18	18
AC-520, AF-520	10½	13	DP-16	18
AC-550, AF-550-600	10½	13	18	18
AC-600	10½	14	DP-17	18
AC-620, AF-620, ACR-620	11½	14	DP-17	22
AC-650, AF-650	10½	13	18	18
AC-700, AF-700	11½	14	DP-18	22
AC-720, AF-720, ACR-720	11½	9	DP-18	22
AC-750, AF-750, ACR-750	11½	9	DP-20	22
AC-770	11½	14	DR-20	22
AC-800	11½	9	DR-28	22
AC-850	11½	9	DR-38	22
AC-870, AC-890, AF-850	11½	9	DR-20	22
AF-800	11½	9	DR-12	22
ACR-520	10½	14	DP-16 DR-20	18
AFR-520	11½	14	DP-16	18
AFR-720	11½	9	DP-18	22

DP—Double Performance.
DR—Double Reduction. *Add 2 qt. for filter.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
EC, ECS, EF thru 470	100	15	Pos
AC, AF, ACR, AFR 500 thru 890	110	17	Pos

TENSIONS

ENGINE MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
228, 236, 248, 270	75–80	70–80	40–50
278, 308	75–80	75–85	65–75
361, 426, 477	75–80	90–100	90–100

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
EC-100-150-250-280	Own 228	6-3 9/16 x3 13/16	40-25	4B			.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
FC-350, ECS-350, EF-350	Own 236	6-3 5/8 x3 13/16	40-25	4B			.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
EC-400, EF-400	Own 248	6-3 11/16 x3 13/16	40-25	4B			.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
EC-450-470, ECS-450, EF-450	Own 270	6-3 25/32 x4	40-25	4B			.012	.016	AC	44 COM	14mm	.030	.018	.022	Ball	100
AC-550, AF-550	Own 278	6-3 5/8 x4 1/2	40-25	4B			.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AC-520-600-650, AF-520-600-650	Own 308	6-3 13/16 x4 1/2	40-25	4B			.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AC-620-700-770, AF-620-700	Own 361	6-4 1/8 x4 1/2	40-25	8B			.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AC-720-800-870, AF-720-800	Own 426	6-4 1/4 x5	40-25	8B			.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AC-750-850-890, AF-750-850	Own 477	6-4 1/2 x5	40-25	8B			.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
ACR-520, AFR-520	Own 308	6-3 13/16 x4 1/2	40-25	4B			.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
ACR-620	Own 361	6-4 1/8 x4 1/2	40-25	8B			.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
ACR-720, AFR-720	Own 426	6-4 1/4 x5	40-25	8B			.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
ACR-750	Own 477	6-4 1/2 x5	40-25	8B			.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100

VALVE SPRINGS

ENGINE MODEL	VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Valve Open: Length Inches	Valve Closed: Pressure (Ave.) Pounds	Valve Closed: Length Inches
228	124-140	1.505	54-62	1.821
236	124-140	1.505	54-62	1.821
248	124-140	1.505	54-62	1.821
270	124-140	1.505	54-62	1.821
278	117-125	1 41/64	58-64	1 63/64
308	117-125	1 41/64	58-64	1 63/64
361	117-125	1 41/64	58-64	1 63/64
426	117-125	1 41/64	58-64	1 63/64
477	117-125	1 41/64	58-64	1 63/64

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In deg.)
EC-100	9/64-7/32	1½	0 to ½	7 1/16
EC-150	9/64-7/32	1½	½ to 1	7 1/16
EC-250	5/32-7/32	1½	½ to 1	7 1/16
EC-280	3/16-1/4	1½	½ to 1	7 1/16
EC-300	3/16-1/4	1½	2½*	7 1/16
ECS-300-370, EC-350-400-450-470, EF-350-400-450-470, ECS-450	3/16-1/4	1	1*	8
AC-520-550-600-620-650, AF-520-550-600-620-650	3/16-1/4	½	1	8
AC-700-720-750-770-800-850-870-890, AF-700-720-750-800-850	3/16-1/4	3/4	1	8
ACR-520-620, AFR-520	3/16-1/4	½	1	8
ACR-720-750, AFR-720	3/16-1/4	3/4	1	8

*—Loaded

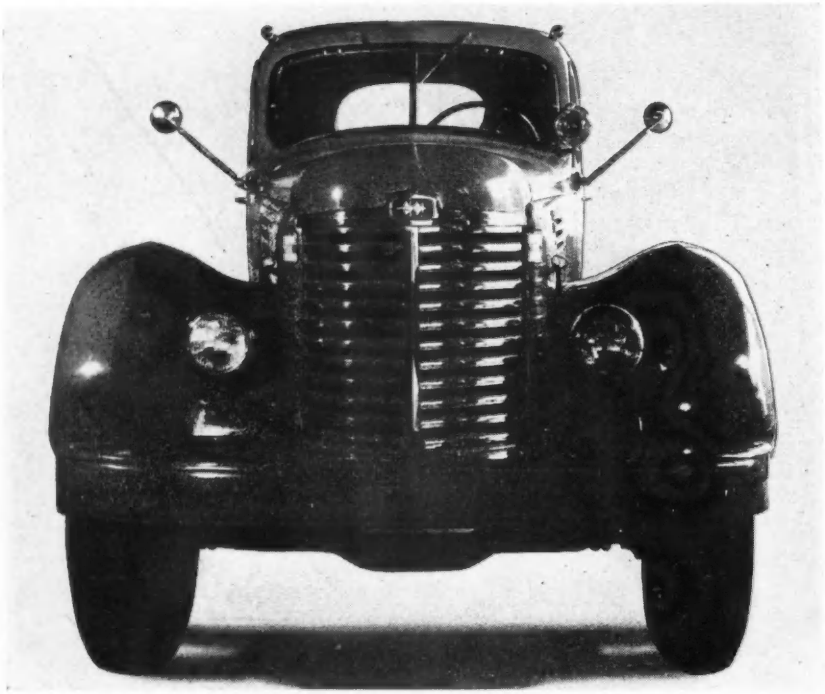
LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range	TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
EC, ECS and EF Series (1947)	20 above 32° 10W below 32°	50a	50a	90Hyp(b)	90Hyp(c)	140d	140d	140-90e
AC, ACR, AF Series (1947)	30 above 32° 10W below 32°	50a	50a	90Hyp(b)	90Hyp(c)	140d	140d	140-90e

a—Aviation grade engine oil with anti-foam characteristics
b—Under severe conditions use 140Hyp.
c—Use 80Hyp below 0°
d—Add 3% cylinder oil sodium soap grease
e—Straight mineral oil
Hyp—Truck-type hypoid lube

INTERNATIONAL

Service data for 1947 series KB-1, KB-2, KB-3, KB-5, KB-6, KB-7, KB-8, KB-10, KB-11, KB-12 and W-3042H, W-4064-H, W-6564-OH



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
KB1, KB2, KB1M	5½	3	4	15
KB3, KB3M	5½	3a	5	15
KB5	5½	5½	7	18½
KBS5	5½	5½	13	16½
KB6	7¼	5½b	7	20¾
KBS6	7¼	5½b	13	20¾
KB6F	7¼	5½b	7ea	20¾
KB7	7¼	11	7	20¾
KBS7	7¼	11	18	20¾
KB8	10	11c	18	25½
KBR8	10	11c	20	25½
KBS8	10	11c	18	25½
KB8F	10	18d	10ea	25½
KB10	10	18d	12	25½
KBR10	10	18d	17	25½
KBS10	10	18d	20	25½
KBR11	10	26	19	26¼
KBS11	10	26	17	26¼
KB11F	10	26	18ea	26¼
KBR12	16	26	38	36½
KBS12	16	26	39	....
W-3042-H	22	18	38	68
W-4064-H	22	18	18ea	68
W-6564-OH	22	18	....	68

a—With 4-speed transmission—5¼ pt.
b—With 5-speed transmission—11 pt.
c—With F-52 transmission—18 pt.
d—With F-54b transmission—26 pt.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
KB1 to KB5 Series	105	15	Pos
KB6 & KB7 Series	145	17	Pos
KB8 to KB12 Series	152	19	Pos
W Series	200	25	Pos

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
GRD	60-70	100-110	75-85
BLD	75-85	100-110	75-85
FBC, RED, Int-Conr-6588	100-110	130-140	70-75
Int-Con S-6749	145-155	100-110	70-75

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
KB-1, KB-2, KB-3 Series	Own GRD214	6-3 1/16x4 1/16	25-600	10°B	.....	.020	.015	.017	AC	87S	18mm	E	D	4°B	.....	107
KB-5, KBS-5	Own GRD233	6-3 1/16x4 1/2	25-600	10°B	.....	.020	.015	.017	AC	87S	18mm	E	D	4°B	.....	108
KB-6, KBS-6, KB-6F	Own BLD250	6-3 7/16x4 1/2	40-1800	5°B	.....	.023	.015*	.015*	AC	43	14mm	E	D	3°B	.....	115
KB-7, KBS-7	Own BLD269	6-3 7/16x4 1/2	40-1800	5°B	.....	.023	.015*	.015*	AC	43	14mm	E	D	3°B	.....	115
KB-8, KBS-8 Series	Own Red 361	6-4 1/16x4 1/2	40-1800	5°A	.....	.016	.015*	.015*	AC	75	14mm	E	D	10°B	.....	89
KB-10, KBR-10, KBS-10	Own Red 401	6-4 1/16x5	40-1800	5°A	.....	.016	.015*	.015*	AC	75	7/8	E	D	6°B	.....	99
KBR-11, KBS-11, KB-11F	Own Red 450	6-4 5/16x5	40-1500	8°B	.....	.023	F	F	AC	43	14mm	E	D	TC	.....	122
KBR-12, KBS-12	Own-ConR6586	6-4 13/16x5 5/16	50-2600	12°B	.....	.0165	.020	.020	Ch	5	18mm	.030	D	5°B	.....	120
W-3042-H, W-4064-H, W-6564-OH	Own-ConS6749	6-5 3/16x5 1/2	50-2600	17°B	.....	.020	.025	.020	Ch	5	18mm	.030	D	5°B	.....	120

D—.018-.024 E—.028-.032 F—.018-.020

VALVE SPRINGS

MODEL	Valve Open: Pressure (Ave.) Pounds	Length Inches	Valve Closed: Pressure (Ave.) Pounds	Length Inches
KB1, KB2, KB3, KB5, KBS5, KBIM, KB3M	85	1 15/16	47	2¼
KB6, KBS6, KB6F, KB7, KB57	93	1 45/64	56	2
KBS, KBR8, KBS8, KB8F, KB10, O.	90	1 25/32	40	2 5/32
KBR10, KBS10 I.	45	1 19/32	20	1 13/32
KBR11, KBS11, KB11F O.	138	1 45/64	58	2 5/32
I.	86	1 33/64	36	1 11/32
KBR12, KBS12 O.	165	1 3/4	70	2¼
I.	85	1 3/4	35	2¼
W-3042-H, W-4064-H, O.	.....	.....	90	2¾
W-6564-DH I.	.....	.....	45	2 14/32

I—Inner O—Outer

FRONT END

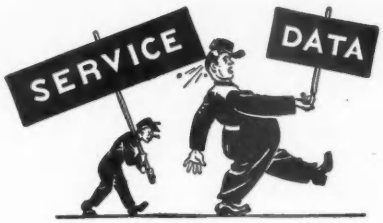
MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
KB1, KB2	1/8-3/16	1	2-3	7½
KB1M, KB3	1/16-1/8	1	2-3	8
KB3M	1/16-1/8	1	1½-1¾	4
KB5, KBS5, KB6, KBS6, KB6F, KB7, KBS7, KB8, KBR8, KBS8, KB8F, KB10, KBR10, KBS10, KBR11, KB11F, KRS11, KBR12, KBS12	1/16-1/8	1	1½-1¾	4
W-3042-H, W-4064-H, W-6564-OH	5/16-3/8	1	1	4

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
All models	(S)N30 or 40 (S)H40 or 50	30@32° to 90° 20W@10° to 32°	10W@-10° to 10°	140	90	140a	90a	140	90	140

a—With 2-speed axles and on all West coast models use 90EP below 30°, 140EP above 30°

EP—Truck-type extreme pressure lube



KENWORTH

Service specifications for current production models 521, 522, 523, 524, 528, 532, 548, 552



CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
521	20	18	38	56
522	20	18	38	56
523	20	18	14	56
524	20	18	20	56
528	..	24	14	48
532	8	16	14	48
548	20	18	26	56
552	20	18	26	56

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
All gasoline models (1946-47)	168*	21	Pos
All diesel models (1946-47)	168**	21	Pos

*—2 Batteries; **—4 Batteries.

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
521, 522, 523, 524	430-450	310-330	105-115
528	See data under BUDA, page 55		
532	73-75	96-100	67-69
548, 552	430-450	310-330	105-115

Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
521, 522, 523, 524, 548, 552	Cum HB-600	6-4⅞x6	55-	5°B	.....	.....	.014	.022	.....	.....	Diesel		.020	10°B	.....	525
528	Bud L0525	6-4½x5½	25-1000	10°B	.....	.009	.008	.016	.....	.....	14mm	.025	.....	.....	.....	.....
532	Wau 6MZA	6-4¼x4¾	40-1500	8°A	.....	.004	.009	.018	.....	.....	14mm	.025	.....	.....	.....	.....

VALVE SPRINGS

MODEL	Valve Open: Pressure (Ave.) Pounds	Valve Open: Length Inches	Valve Closed: Pressure (Ave.) Pounds	Valve Closed: Length Inches
521, 522, 523, 524	136	2⅝	87	2¹¹⁄₁₆
528	125-138 at 1¹³⁄₁₆ length			2⅝†
532	.....	.....	.....	.....
548, 552	136	2⅝	87	2¹¹⁄₁₆

†—Free length.

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
521, 522, 523, 524, 528, 532, 548 (1947)	1/16-1/8	1	1½±¼	8
552 (1947)	1/16-1/8	0	5	0

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range	TRANSMISSION: Summer	TRANSMISSION: Winter	REAR AXLE: Summer	REAR AXLE: Winter	STEERING GEAR: Summer	STEERING GEAR: Winter	UNIVERSAL JOINT
521, 522	(S)30 (W)20	50	50	140EP	90EP	140	90	140
523, 524	(S)30 (W)20	50	50	140	90	140	90	140
528, 532	(S)40 (W)30	140	90	140	90	140	90	140
548, 552	(S)30 (W)20	50	50	140	90	140	90	140

EP—Extreme pressure lube S—Summer W—Winter

MARMON-HER.

Service data for Marmon-Herrington models DVL-1, MH440-4, MH555-4 and LD, OT, M5 and M6 series



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
DVL-1	4½	3	a	17
MH440-4	8	16	15b	32
MH555-4	9	24	21c	36
LD Models	5	5	2½d	17
OT Models	5	5	3e	17
M5, M6	5	5	5½f	17

a—Front axle only—3 pt.
b—Front axle—20 pt.
c—Front axle—24 pt.
d—Front axle—3½ pt.
e—Front axle—2½ pt.
f—Front axle—6½ pt.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
LD, OT, M5, M6 Series (1940-47)	120	17	Pos
DVL1 (1946-47)	100	15	Pos
MH440-4 (1946-47)	160	17	Pos
MH555-4 (1946-47)	140	13	Pos

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
DVL-1	Cap Screws 65–75 Nuts 60–65	65–70	50–55
MH440-4	60	*70	105
		**105	††53
MH555-4	75	*105	105
		**123	‡115
LD, OT, M5, M6 Series			
aluminum head	40	75	35
iron head	50	75	35

*Center and Rear. **Front and Intermediate.
††Connecting Rod 7/16 in.
‡Connecting Rod 9/16 in.

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC A-After B-Before	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
DVL-1 (1946-47)	Willys CJ-2A	4–3 1/16 x 4 3/8	50–30	9°B	.....	.017	.014	.014	AL	AN-7	14mm	.030	.020	TC	TC	115
LD, OT, M5, M6 Series (1942-47)	Ford 100	8–3 9/16 x 3 3/4	30–2000	TC	TC	.015	.012C	.015C	Ch	8 COM	14mm	.025	D	4°B	.....	100
MH440-4 (1946-47)	Her WXLC3	6–4 1/4 x 4 3/4	36–1600	2°A	Bar	.010	.006	.010	Ch	H-10	14mm	.025	.020	TC	TC	....
MH555-4 (1946-47)	Her RXC	6–4 5/8 x 5 1/4	26–2600	2°A	3 1/4 A	.010	.006	.010	Ch	No. 8	18mm	.025	.020	TC	TC	103

D—.014—.016

VALVE SPRINGS

MODEL	VALVE SPRINGS: Valve Open Pressure (Ave.) Pounds	Valve Open Length Inches	Valve Closed Pressure (Ave.) Pounds	Valve Closed Length Inches
DVL-1	116	1 3/4	50	2 7/64
LD, OT, M5, M6 series	76–80	1.827	37–40	2.13
MH440-4, MH555-4	102	2 5/32	50	2 25/64

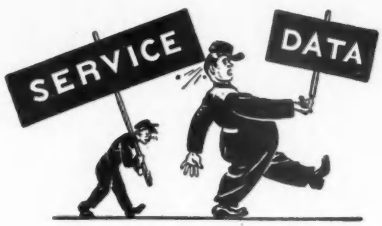
FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
DVL-1 (1947)	0–1/8	3/4	2	9
LD Series, OT Series (1940-46)	1/16–1/8	3/4	1–2	8 1/4
M5, M6 (1940-47)	0–1/8	0	1½	0
MH440-4 (1946-47)	1/16–5/16	0	0–1	2
MH555-4 (1946-47)	3/16–5/16	0	0–1	1½

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
DVL-1	(S)30	(W)20	10W below 10°	140	90	140a	90a	140	140	140
MH440-4, MH555-4	(S)40	(W)20	10W below 10°	140	90	140a	90a	140	140	140
M5, M6, OT and LD series	(S)40	(W)20	10W below 10°	140	90	140a	90a	90	90	140

a—Also front axle S—Summer W—Winter



OSHKOSH

Service specifications for models W307, W-700, W-703, W-705, W-906 and W-2200 series

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
W307	8	18a	12	36
W700	11	21a	15	46
W703, W705	14	21a	15	46
W906	16	19b	24c	40
W2200, W2201	24	19b	24c	80
W2202, W2203, W2204	24	19b	40d	80

a—Auxiliary transmission—6 pt. c—Same for front axle.
b—Auxiliary transmission—10 pt d—Front axle—36 pt.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
W906, W1600, W1602, W2204	204	25	Pos
W307, W700, W703, W705, W1700, W2200, W2201, W2202, W2203	153	19	Pos

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
W307	60	*70 **105	105 ††53
W700	75	*105 **123	104 ‡115
W703, W705	80	175	153 †123
W906	430-450	310-33	105-115

*Center and Rear. **Front and Intermediate
††Connecting Rod $\frac{7}{16}$ in. †Babbitt.
‡Connecting Rod $\frac{9}{16}$ in.



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P..M	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
W307 (1947)	Her WXLC-3	6-4¼x4¾	26-1600	2°A	.....	.010	.006	.010	Ch	1 COM		.025	.020	.....	.....	.....
W1700 (1947)	Her RXC	6-4⅝x5¼	26-2600	2°A	.....	.006	.006	.010	Ch	1 COM		.025	.020	.....	.....	110
W703 (1946-47)	Her RXLD	6-4¾x5¼	26-2600	2°A	.....	.006	.006	.010	Ch	1 COM		.025	.020	.....	.....	110
W906 (1946-47)	Cum HB600	6-4⅞x6	55-	15°A	.....		.025	.025						.....	.....	.....
W2200 (1947)	Bud MO-779	6-5¼x6	35-1800	20°B	.....	.018	.015	.015	Ch	6COM62	18mm	.027	C	.....	.....	125a
W-2201, W-2202 (1947)	Bud MO-893	6-5⅝x6	35-1800	20°B	.....	.018	.015	.015	Ch	6COM62	18mm	.027	C	.....	.....	125a
W-2203 (1947)	Bud MO-970	6-5⅝x6½	35-1800	20°B	.....	.018	.015	.015	Ch	6COM62	18mm	.027	C	.....	.....	125a
W1600, W1602, W-2204 (1947)	Bud 6DC-844	6-5¼x6½	35-1800	20°B	.....	.018	.015	.015	.....	.....	.....	.....	.....	.....	.....	385b

a—At 600 r.p.m. b—At 200 r.p.m. C—.018—.024

VALVE SPRINGS

MODEL	VALVE SPRINGS: Valve Open Pressure (Ave.) Pounds	Valve Open Length Inches	Valve Closed Pressure (Ave.) Pounds	Valve Closed Length Inches
W307, W700, W703, W705, W1700	102	$2\frac{5}{32}$	50	$2\frac{33}{64}$
W906	136	$2\frac{3}{16}$	87	$2\frac{11}{16}$
W1600, W2200 Series	155-195	$2\frac{3}{16}$	62-68	$2\frac{3}{4}$

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
W307, W700, W703, W705, W1700	0-$\frac{1}{8}$	1	1	3
W906, W1600 and W2200 Series	0-$\frac{1}{8}$	½	1	3

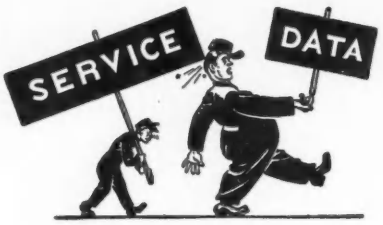
LUBRICATION

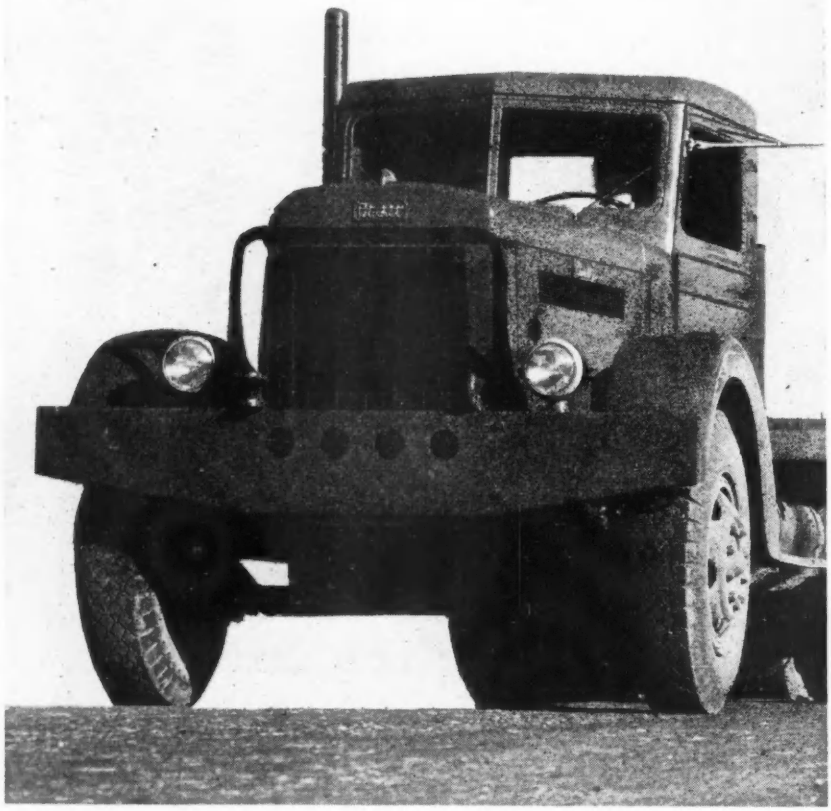
MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
All models (1936-47)	40 above 32°	30@0° to 32°	20 below 0°	140	90	140a	90a	140	140	140

a—Also front axle

PETERBILT

Covering models 270DD, 344DT, 345DT, 354DT, 355DT





Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

CAPACITIES

MODEL	LUBRICANT CAPACITY			Cooling System Capacity, Quarts
	Engine Quarts	Transmission Pints	Rear Axle Pints	
344DT (1944-47)	20	18	14ea	60
345DT, 354DT, 355DT (1944-47)	20	18	20ea	60
270D (1944-47)	20	18	26	60

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
All Models (1944-47)	152*	19	Pos

*—2 Batteries

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
All Models	430-450	310-330	105-115

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
270DD, 344DT, 354DT, 345DT, 355DT (1944-47)	Cum HB600	6-4½x6	55-	15°A	.....	.....	.025	.025	Diesel	.....	.....	.....	.....	.....	.....	....

VALVE SPRINGS

MODEL	VALVE SPRINGS			
	Valve Open		Valve Closed	
	Pressure (Ave.) Pounds	Length Inches	Pressure (Ave.) Pounds	Length Inches
344DT, 354DT (1944-47)	136	2⅝	87	2¹¹⁄₁₆
270D, 345DT, 355DT (1945-47)	136	2⅝	87	2¹¹⁄₁₆

FRONT END

MODEL	TOE-IN (in inches unless otherwise shown)	CAMBER (in degrees)	CASTER (in degrees)	KING PIN SLANT (in degrees)
All Models (1944-47)	0-⅛	1	1½	8

LUBRICATION

MODEL	ENGINE			TRANSMISSION		REAR AXLE		STEERING GEAR		UNIVERSAL JOINT
	Viscosity and Temperature Range			Summer	Winter	Summer	Winter	Summer	Winter	
All models (1944-47)	50 above 90°	40@60° to 90°	30@10° to 60°	140	90	140	90	140	90	140

REO

Service data for models 19, 21, 22, 23, 25 (1946-47)



CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
19 (1947)	8	8	6	18
21 (1947)	8	12	9	19
22 (1947)	8	12	12	19
23 (1947)	8	20	12	28
25 (1947)	8	20a	32	30

a—Auxliary Transmission, 7½ pt. summer 10 pt. winter.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
19	90	13	Pos
21, 22, 23	136	17	Pos
25	136*	17	Pos

*—2 Batteries

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
19, 21, 22 (1947)	83–100	67–75	70–75
23, 25 (1947)	See data under CONTINENTAL, page 56.		

Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
19 (1947)	Own GC245	6–3½x4¼	40–	5°B	2B	.012	.008	.010	Ch	JC10	14mm	.032	.018	8°B	3B	105
21 (1947)	Own GC288	6–3½x5	40–	5°B	2B	.012	.008	.010	Ch	JC10	14mm	.032	.018	8°B	3½B	105
22 (1947)	Own GC310	6–3⅝x5	40–	5°B	2B	.012	.008	.010	Ch	JC10	14mm	.032	.018	8°B	3½B	105
23 (1947)	Con B6371	6–4⅛x5⅝	30–40	6½°B	.....	.022	.020C	.020C	Ch	8 COM	18mm	.030	.....	.....	.....	124
25 (1947)	Con B6427	6–4⅝x4⅞	40–50	.....	.....	.022	.020C	.020C	Ch	8 COM	18mm	.300	.....	.....	.....	124

C—Cold

VALVE SPRINGS

MODEL	Valve Open: Pressure (Ave.) Pounds	Valve Open: Length Inches	Valve Closed: Pressure (Ave.) Pounds	Valve Closed: Length Inches
19, 21, 22 (1940-47)	135–145	2⅛	50–54	2⅜
23, 25 (1946-47)	102–110	1.521	45–51	1⅞

FRONT END

MODEL	TOE-IN (in inches unless otherwise shown)	CAMBER (in degrees)	CASTER (in degrees)	KING PIN SLANT (in degrees)
19, 21, 22, 23, 25 (1940-47)	1/16–¼	1	¾–1¼	8

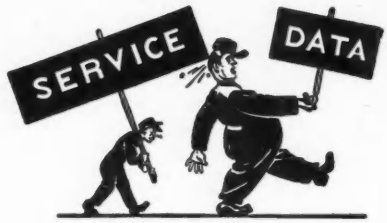
LUBRICATION

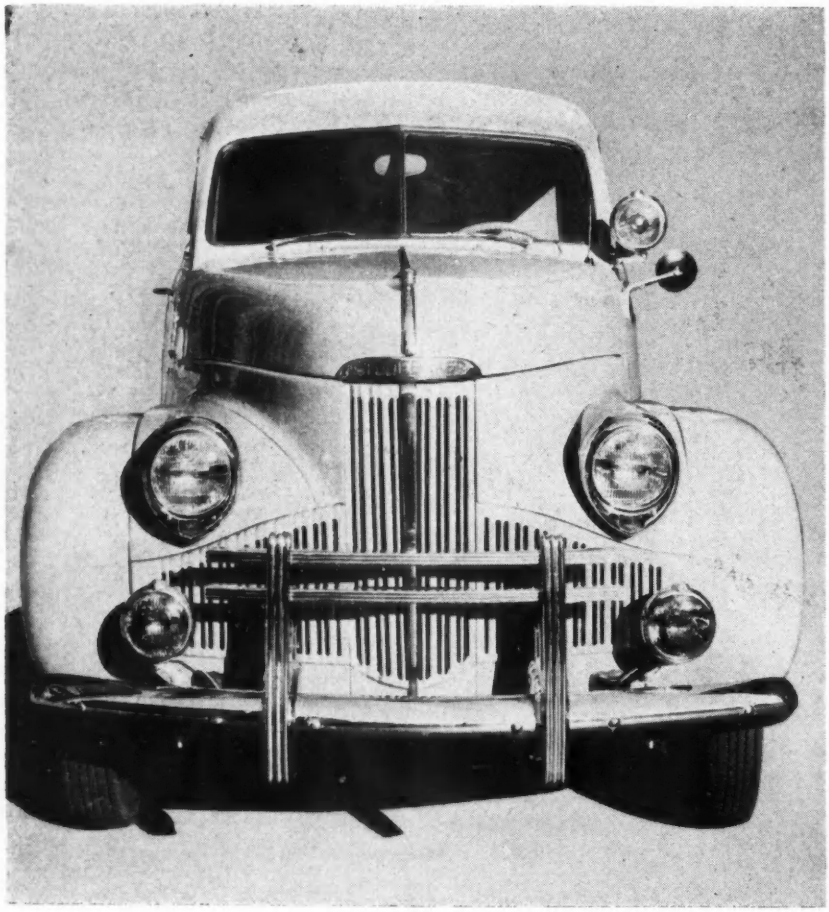
MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
All models (1945-47)	30 above 32°	20W@0° to 32°	10W below 0°	140	90	140a	90	90	90	.....

a—With double reduction axle, 90

STUDEBAKER

Service data for models M5, M15, M15A, M16 (1946-47)





CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
M5 (1941-47)	5	2½a	3	10½
M15, M15A (1941-47)	5	6	6⅛	10½
M16 (1941-47)	8	6	7b	13

a—With overdrive—4½ pt.
With 4-speed transmission—6 pt.
b—With 2-speed axle—12 pt.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
M5, M15, M16 (1946-47)	90	15	Pos

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
M5, M15, M15A	46-50	88-93	28-32
M16	80-85	88-93	52-54

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
M5 (1941-47)	Own 1M	6-3x4	40 Min.	15°B	5B	.020	.016C	.016C	Ch	J9†	14mm	.025	.020	2°B	¾B	105
M15 (1941-45), M15A (1946-47)	Own 2M	6-3x4	40 Min.	15°B	5B	.020	.016C	.016C	Ch	J9†	14mm	.025	.020	2°B	¾B	105
M16 (1941-47)	Own 3M	6-$3\frac{5}{16}$x$4\frac{3}{8}$	40 Min.	15°B	5½B	.020	.016C	.016C	Ch	J9†	14mm	.025	.020	2°B	¾B	105

†—8A COM, 18mm plugs in 1941 only. C—Cold

VALVE SPRINGS

MODEL	VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Length Inches	Valve Closed: Pressure (Ave.) Pounds	Length Inches
M5, M15, M15A (1941-47)	77-85	$1\frac{7}{16}$	37-41	$1\frac{3}{4}$
M16 (1941-47)	125-135	$1\frac{3}{4}$	54-60	$2\frac{5}{32}$

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
M5 (1941-47)	$\frac{1}{16}$-⅛	1	½-1	7½
M15, M15A, M16 (1941-47)	$\frac{1}{16}$-⅛	1	½-1	8

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
M5 (1941-47)	30@32° to 90°*	30@10° to 32°	10 below 10°	90a	90a	90Hyp	90Hyp	B	B	C
M15, M15A, M16 (1941-47)	30@32° to 90°*	20@10° to 32°	10 below 10°	140	90b	140	90b	B	B	C

*—Use 40 for high speed above 90° a—If equipped with overdrive use 90 mineral gear lube or 50 engine oil b—Below 32° only
B—Special lubes approved by Rose Tool & Gear Co. C—Light-weight pressure gun grease Hyp—Truck-type hypoid lube

WALTER

Service specifications for models FGB, FGR, FCK, FC, FKM, FN and FZM (1943 to 1947)



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

CAPACITIES

MODEL	LUBRICANT CAPACITY			Cooling System Capacity, Quarts
	Engine Quarts	Transmission Pints	Rear Axle Pints	
FGB, FGR (1943-47)	18	32	8	50
FC, FCK (1936-47)	10	25	7	42
FKM (1936-47)	10	17	5	38
FN-FZM (1936-47)	8	17	5	32

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
FN, FZM (1943-47)	160	17	Pos
FC, FCK, FKM (12-volt) (1943-47)	120*	15	Pos
FGB, FGR (12-volt) (1943-47)	160*	17	Pos

*—2 Batteries

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
FN, FZM	73–75	96–100	67–69
FKM, FCK, FC, FCR	73–75	129–133	121–125
FGB, FGR	130–134	242–250	73–75

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
FN, FZM (1943-47)	Wau MZR	6-4¼x4¾	40–1500	8°A	3A	.004	.008-10C.	014-16C	Opt	.....	18mm	.025	.018	Var	.....	130
FKM, FCK, FC, FCR (1943-47)	Wau SRKR	6-4⅝x5½	40–1500	8°A	3A	.004	.008-10C.	014-16C	Opt	.....	⅞	.025	.018	Var	.....	130
FGB, FGR (1943-47)	Wau 145GK	6-5¼x6	40–1500	5°A	2A	.006	.009-11C.	024-26C	Opt	.....	18mm	.025	.018	Var	.....	130

C—Cold

VALVE SPRINGS

MODEL	VALVE SPRINGS			
	Valve Open		Valve Closed	
	Pressure (Ave.) Pounds	Length Inches	Pressure (Ave.) Pounds	Length Inches
FN, FZM	101	1 31/32	64	2 11/32
FKM, FC, FCK, FCR	94	2 25/64	59	2 49/64
FGB, FGR O.	158	2 3/8	67	2 21/32
I.	100	2 1/16	42	2 21/32

I—Inner. O—Outer

FRONT END

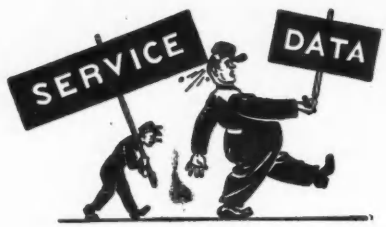
MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
FN, FKM, FZM, FCK, FC, FGB, FGR, (1936-47)	N 1/16	1½	5	2

N—Negative

LUBRICATION

MODEL	ENGINE			TRANSMISSION		REAR AXLE		STEERING GEAR		UNIVERSAL JOINT
	Viscosity and Temperature Range			Summer	Winter	Summer	Winter	Summer	Winter	
All Models (1936-47)	(s)50	(w)30	.....	250	140	250	140	140	140	90

WARD LaFRANCE



Service specifications for models D-1, D-1B, D-1C, D-2, D-2B, D-3 and D-5



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
D-1	8a	16	16	36
D-1B, D-2B	10a	24	16	36
D-1C	8a	16	34	36
D-2, D-3	14a	24	34	36
D-5	20	24	34	36

a—Plus 1 qt. per filter

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
All gasoline models	152*	19	Pos
All diesel models	152**	19	Pos

*—2 Batteries; **—4 Batteries.

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
All Models	See CONTINENTAL, page 56		

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb at M.P.H or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Flywheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
D-1 (1946-47)	Con-B-6427	6-4 5/16x4 7/8	40-65				.018	.018	Ch	8 COM	18mm	.025	.020	5° BTC		
D-1B (1946-47)	Con-22R	6-4 1/2x5 1/4	30-40				.014	.020	Ch	8 COM	18mm	.025	.020	TDC		
D-1C (1946-47)	Con-B-6427	6-4 5/16x4 7/8	40-65				.018	.018	Ch	8 COM	18mm	.025	.020	5° BTC		
D-2 (1946-47)	Con-R-6513	6-4 1/2x5 5/8	40-60				.020	.020	Ch	8 COM	18mm	.025	.020	5° BTC		
D-3 (1946-47)	Con R6572	6-4 3/4x5 5/8	40-60				.020	.020	Ch	8 COM	18mm	.025	.020	5° BTC		
D-5 (1947)	Cum HB600	6-4 7/8x6														

VALVE SPRINGS

MODEL		VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Valve Open: Length Inches	Valve Closed: Pressure (Ave.) Pounds	Valve Closed: Length Inches
D-1, D-1C	O.	114	1.521	56	1 7/8
	I.	30	1 11/64	12.8	1 17/32
D-1B, D-2B	O.	110	1 7/8	56.7	2 1/4
	I.	50	1 29/32	22.4	2 1/32
D-2	O.	165	1 3/4	70	2 1/4
	I.	85	1 3/4	35	2 1/4
D-3	O.	165	1 3/4	70	2 1/4
	I.	85	1 3/4	35	2 1/4
D-5		129-143		83-91	3 19/64†

†—Free length. I—Inner. O—Outer.

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
D1, D1B, D1C, D2, D2B, D3, D5	1/16±1/16	1/4-1 1/2	1/2-1 1/2	8

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
D-1, D-1B, D-2B	40 above 32°	30@0° to 32°	10@-10° to 0°	140a	90a	140a	90a	140	140	.....
D-1C, D-2, D-3	40 above 32°	30@0° to 32°	10@-10° to 0°	140a	90a	140EP	90EP	140	140	.....
D-5	30@80° to 100°*	20@20° to 80°	10 below 20°	140a	90a	140EP	90EP	140	140	.....

*—Use 40 in extra hot weather a—Straight mineral oil EP—Extreme pressure lube

WHITE

Service specifications for 1947 models WB14, WB20, WB20T, WB22, WB22T, WB26, WB28, WB28T, WB2264, WB2864 and WB3264

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
WB-14	12	13	11	28
WB20, WB20T	12	13	11	29
WB22, WB22T	12	20	22	29½
WB26	12	20	25	28½
WB28, WB28T	15	24	22	41
WB2264	12	20	12ea	29½
WB2864	15	24	14ea	41
WB3264	15	24	20ea	41

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
WB14, WB20, WB20T, WB22, W22T, WB26, WB2264	119	15	Pos
WB28, WB28T, WB2864, WB3264	119*	15	Pos

*—2 Batteries

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
All Models (See Note)	⅜"– 28– 32 ½"– 48– 52 ½"– 70– 75	⅝"–105–115 ¾"–140–150 ¼"–175–185	

NOTE: ⅜"cylinder head cap screws on engine models 100A 120A, 140A, 150A: 85–90 lb.-ft.



Note: Specifications are for standard models. If optional engine is used, see data for appropriate engine on this page or under engine manufacturer's listing on pages 55 to 57

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
WB-14	100A	6–3⅞x4½	35 Max	15°B	.....	0	0	0	Ch	JC10	14mm	D	E	7°B	.....	
WB20, WB20T	120A	6–3⅞x4½	35 Max	15°B	.....	0	0	0	Ch	JC10	14mm	D	E	7°B	.....	
WB22, WB22T	140A	6–3⅞x5⅛	35 Max	15°B	.....	0	0	0	Ch	JC10	14mm	D	E	7°B	.....	
WB26, WB2264	150A	6–4x5½	35 Max	15°B	.....	0	0	0	Ch	J6–64	14mm	.025	F	7°B	.....	
WB28, WB28T, WB2864	260A	6–4½x5	45 Max	15°B	.....	0	0	0	Ch	6 COM	18mm	.025	F	9°B	.....	
WB3264	280A	6–4½x5	45 Max	15°B	.....	0	0	0	Ch	6 COM	18mm	.024	F	9°B	.....	

D—.025—.028 E—.017—.018 F—.018—.024

VALVE SPRINGS

MODEL	VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Length Inches	Valve Closed: Pressure (Ave.) Pounds	Length Inches
100A, 120A, 140A, 150A	99–107	2⅛	Free length	3
260A, 280A O.	100–108	1.827	Free length	2⅛
I.	91–99	1.827	Free length	2⅛

I—Inner. O—Outer.

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
WB14, WB20, WB20T	⅛*	1†	2°50'‡	8
WB22, WB22T, WB28, WB28T, WB2264, WB2864, WB3264	⅛*	1†	2°50'‡	8½

*—plus 0, minus ⅛ †—plus 20', minus 5' ‡—plus or minus 15'

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range	TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
All WB models	(S)30 (W)20	140	90	140	90	.....	.....	140

(S)—Summer (W)—Winter

WILLYS

Service data for model CJ-2A (Universal Jeep)

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
CJ-2A	Cap Screws 65–75 Nuts 60–65	65–70	50–55

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
CJ2A (Universal Jeep)	5	3	2½a	11

a—Same for front axle.

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
C-J-2A (Universal Jeep)	100	15	Neg

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
CJ-2A (Universal Jeep)	Own	4-3⅛x4¾	40-50-30	9°B	2½B	.020	.014	.014	AL	AN-7	14mm	.030	.020	5°B	1.3B	111

VALVE SPRINGS

MODEL	VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Length Inches	Valve Closed: Pressure (Ave.) Pounds	Length Inches
CJ-2A (Universal Jeep)	116	1¾	50	2¼

FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
CJ-2A (Universal Jeep)	¼	1½	3	7½

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
CJ-2A (Universal Jeep)	30 above 90°	20@32° to 90°	20W@10° to 32°*	90	80	90EP	90EP	140	140	A

*—10W@–10° to 10°, 10% kerosene below–10° EP—Extreme pressure lube
A—Front axle shaft U-joint; Fibre grease. Propeller shaft U-joint; NLGI #0, winter; NLGI #1, summer

HUDSON

Service specifications for 1947 model 178

BATTERY

MODEL	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
178	96	17	Pos

CAPACITIES

MODEL	LUBRICANT CAPACITY: Engine Quarts	Transmission Pints	Rear Axle Pints	Cooling System Capacity, Quarts
178	5½*	2	2¾	13

*—Dry refill-4½ qts.

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After: °TC	Flywheel Teeth TC	Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted): Intake	Exhaust	SPARK PLUG: Make	Type	Size	Gap	Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
178 (¾-ton Commercial) 1947	Own	6-3x5		10⅔B		.010	.010	.012	Ch	J9	14mm	.032	.020	⅛B		95

VALVE SPRINGS

MODEL	VALVE SPRINGS: Valve Open: Pressure (Ave.) Pounds	Length Inches	Valve Closed: Pressure (Ave.) Pounds	Length Inches
178	80	1²¹⁄₃₂	40	2

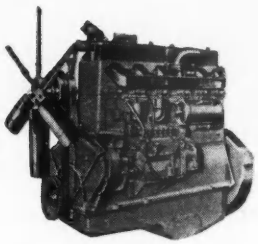
FRONT END

MODEL	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
178 (1947)	0–⅛	½–1½	½–1½	4½

LUBRICATION

MODEL	ENGINE: Viscosity and Temperature Range			TRANSMISSION: Summer	Winter	REAR AXLE: Summer	Winter	STEERING GEAR: Summer	Winter	UNIVERSAL JOINT
178 (1947)	30 above 90°	20@32° to 90°	20W@10° to 32°*	90EP	80EP	90EP	90EP	90EP	90EP	FG

*—Use 10W @ –10° to 10°, 10% kerosene below –10° FG—Fibre grease EP—Extreme pressure lube



BUDA

Service data for current models K-428, LO525, 6MO series, 6BD273, 6DT series and 6DC series

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
	6B-230	6–3 7/16x4 1/8	35–1600	10°	.....	.008	.009	.009	Ch	.....	14mm	.030	.018	.....	.....	.....
	6B-273	6–3 3/4x4 1/8	35–1600	10°	.....	.008	.009	.009	Ch	.....	14mm	.030	.018	.....	.....	.....
	HP326	6–3 15/16x4 3/4	40–1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.030	.018	.....	.....	103
	HP351	6–3 15/16x5 1/8	40–1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.030	.018	.....	.....	103
	K428	6–4 3/8x4 3/4	40–1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.025	.018	.....	.....	102
	L525	6–4 1/2x5 1/2	40–1600	TC	TC	.006	.006	.009	Ch	15A	18mm	.025	.018	.....	.....	87
	LO525	6–4 1/2x5 1/2	40–1500	10°B	.....	.009	.009	.018	Ch	J10	18mm	.025	.018	.....	.....	93
	6MO-779	6–5 1/4x6	35–1800	20°B	.....	.015	.015	.015	Ch	6COM62	18mm	.027	D	.....	.....	125
	6MO893	6–5 3/8x6	30–1200	10°B	.....	.010	.015	.015	Ch	J10	18mm	.027	.018	.....	.....	105
	6MO970	6–5 3/8x6 1/2	35–1800	20°B	.....	.015	.015	.015	Ch	6COM62	18mm	.027	D	.....	.....	125
	6BD-230	6–3 7/16x4 1/8	35–1600	20°	.....	.008	.009	.009	Die	sel	.....	.....	.....	.....	.....	.....
	6BD-273	6–3 3/4x4 1/8	20–1800	20°B	.....	.008	.009	.009	Die	sel	.....	.....	.....	.....	.....	390
	6DT317	6–3 5/8x5 1/8	40–1600	12°B	.....	.009	.009	.012	.....	Die	sel	.....	.....	.....	.....	.....
	6DT468	6–4 1/4x5 1/2	35–1600	12°B	.....	.009	.009	.012	.....	Die	sel	.....	.....	.....	.....	.....
	6DC844	6–5 1/4x6	30–1200	20°B	.....	.010	.015	.015	.....	Die	sel	.....	.....	.....	.....	390
	6DCS-844	6–5 1/4x6 1/2	30–1200	45°	.....	.010	.015	.015	Die	sel	.....	.....	.....	.....	.....	.....
	8DCS-1125	8–5 1/4x6 1/2	30–1200	45°	.....	.010	.015	.015	Die	sel	.....	.....	.....	.....	.....	.....
	8DC-1125	8–5 1/4x6 1/2	30–1200	20°B	.....	.010	.015	.015	Die	sel	.....	.....	.....	.....	.....	.....

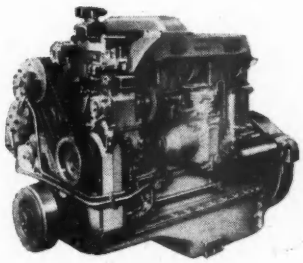
*—At 600 r.p.m. D—.018 to .024

TENSIONS

ENGINE MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
All Models.....	3/8"– 60– 70 7/16"– 75– 85 1/2"– 95–105 9/16"–125–135 5/8"–150–160	11/16"–195–200 3/4"–210–230 13/16"–230–250 7/8"–245–275 1"–285–315 1 1/8"–325–350	

VALVE SPRINGS

MODEL	VALVE SPRINGS			
	Valve Open		Valve Closed	
	Pressure (Ave.) Pounds	Length Inches	Pressure (Ave.) Pounds	Length Inches
K-428 (1936-47).....	125–138	1 13/16	51–57	2 7/32
LO-525 (1938-47).....	128–136	2 19/32	42–49	3 9/32
6MO-779 (1946-47).....	145–155	2 5/16	62–68	2 3/4
6MO-893, 6MO-970 (1946-47).....	145–155	2 5/16	62–68	2 3/4
6BD-273 (1946-47).....	105–115	1 15/32	40–50	1 3/4
6DT-317 (1938-47).....	84–89	1 35/64	35–40	2
6DT-468 (1938-47).....	78–86	1 13/16	35–38	2 5/16
6DC-844 (1944-47).....	144–155	2 5/16	62–68	2 3/4
6DCS-844 (1945-47).....	144–155	2 5/16	62–68	2 3/4



CUMMINS

Service data for current models HB400, HB600, HBS600, NHB600 and NHBS600

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
	HB-400	4–4 7/8x6	E	5°B	.....	.....	.014	.022		Die	sel	.....	.....	.....	.....	525
	HB-600	6–4 7/8x6	E	5°B	.....	.....	.014	.022		Die	sel	.....	.....	.....	.....	525
	HS-600	6–4 7/8x6	E	77°B	.....	.....	.016	.028	Die	sel		.....	.....	.....	.....	525
	NHB-600	6–5 1/8x6	F	20°B	.....	.....	.009	.027	Die	sel		.....	.....	.....	.....	525
	NHBS-600	6–5 1/8x6	F	77°B	.....	.....	.009	.027	Die	sel		.....	.....	.....	.....	625

E—30 to 40 @ 1800 F—30 to 40 @ 1800 to 2100

TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
HB400, HB600, NHB600, NHBS600.....	430–450	310–330	105–115

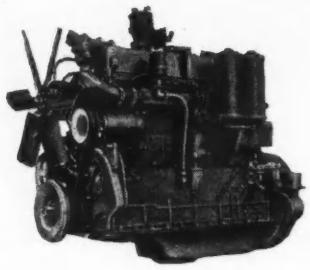
VALVE SPRINGS

ENGINE MODEL	VALVE SPRINGS			
	Valve Open		Valve Closed	
	Pressure (Ave.) Pounds	Length Inches	Pressure (Ave.) Pounds	Length Inches
HB400, HR600, HBS600.....	129–143	2	83–91	2 11/16
NHB600, NHBS600.....	104–114	1 27/32	74–82	2 1/4

CONTINENTAL

Service specifications for current production

Y, F, M, B and R series and model 22R



TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
	Y4069	4-2 1/16x3 1/16	30-40	TC	.....	.012	.012	.012	.....	.....	18mm	E	.....	.....	.....	115
	Y4091	4-2 1/16x3 1/16	30-40	TC	.....	.012	.012	.012	.....	.....	18mm	E	.....	.....	.....	115
	Y4112	4-3 1/16x3 1/2	30-40	TC	.....	.012	.012	.012	.....	.....	18mm	E	.....	.....	.....	115
	F4124	4-3x4 1/8	30-40	TC	.....	.014	.014	.014a	.....	.....	18mm	E	.....	.....	.....	115
	F4140	4-3 1/16x4 1/8	30-40	TC	.....	.014	.014	.014a	.....	.....	18mm	E	.....	.....	.....	115
	F4162	4-3 1/16x4 3/8	35-40	TC	.....	.014	.014	.014a	.....	.....	18mm	E	.....	.....	.....	115
	F6186	6-3x4 1/8	35-40	TC	.....	.014	.014	.014a	.....	.....	18mm	E	.....	.....	.....	115
	F6209	6-3 1/16x4 1/8	35-60	TC	.....	.014	.014	.014a	.....	.....	18mm	E	.....	.....	.....	115
	F6226	6-3 1/16x4 3/8	30-40	TC	.....	.014	.014	.014a	.....	.....	18mm	E	.....	.....	.....	115
	M6253	6-3 1/16x4 1/8	40-50	.....	.....	.0175	.017C	.022C	.....	.....	18mm	E	.....	.....	.....	115
	M6271	6-3 1/16x4 3/8	40-50	6 1/2°B	.....	.0175	.017	.020b	.....	.....	18mm	E	.....	.....	.....	115
	M6290	6-3 3/16x4 3/8	40-50	6 1/2°B	.....	.0175	.017	.020b	.....	.....	18mm	E	.....	.....	.....	115
	M6330	6-4x4 1/8	40-50	6 1/2°B	.....	.0175	.017	.020b	.....	.....	18mm	E	.....	.....	.....	115
	B6371	6-4 1/16x4 3/8	40-50	6 1/2°B	.....	.022	.017	.022d	.....	.....	18mm	E	.....	.....	.....	115
	B6405	6-4 1/16x4 1/2	40-50	6 1/2°B	.....	.022	.017	.022d	.....	.....	18mm	E	.....	.....	.....	115
	B6427	6-4 1/16x4 7/8	40-50	6 1/2°B	.....	.022	.018	.018	.....	.....	18mm	E	.....	.....	.....	115
	22R	6-4 1/16x5 1/4	40-50	5°B	.....	.014	.014	.020	.....	.....	18mm	E	.....	.....	.....	100
	R6513	6-4 1/16x5 5/8	50-60	17°B	.....	.0245	.020	.020	.....	.....	18mm	E	.....	.....	.....	120
	R6572	6-4 3/16x5 5/8	50-60	17°B	.....	.0245	.020	.020	.....	.....	18mm	E	.....	.....	.....	120
	R6602	6-4 7/16x5 5/8	50-60	17°B	.....	.0245	.020	.020	.....	.....	18mm	E	.....	.....	.....	120

C—Cold E—.018—.020

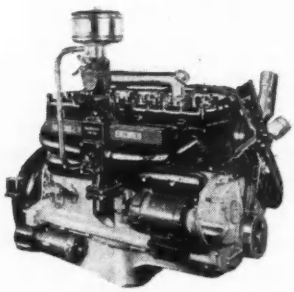
VALVE SPRINGS

MODEL		Valve Open		Valve Closed	
		Pressure (Ave.) Pounds	Length Inches	Pressure (Ave.) Pounds	Length Inches
B6371, B6427	O.	102-110	1.521	53-59	1 7/8
	I.	28-32	1 11/64	11.3-14.3	1 11/32
F6186, F6226		Free Length	1 15/16	42.5-47.5	1 21/32
F4124, F4140, F4162		78-86	1 27/64	47-53	1 49/64
F6186, F6209		98-104	1 5/8	42.5-47.5	1 53/64
M6271, M6290, M6330		111-118	1.521	53-59	1 7/8
22R	O.	106-115	1 7/8	54.7-58.7	2 1/4
	I.	47-53	1 53/64	20.4-24.4	2 1/32
R6513, R6572, R6602	O.	160-170	1 3/4	67-73	2 1/4
	I.	82-88	1 3/4	33-37	2 1/4

I—Inner O—Outer

TENSIONS

ENGINE MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
All Models	5/16"-20-25 3/8" (/16) 30-35 3/8" (/24) 40-45	7/16"- 70- 75 1/2"-100-110 9/16"-130-140 5/8"-145-155	



HERCULES

Service data for IX, OO, QX, JX, WX, YX, RX, HX, DOO, DJX, DRX, DHX and DFX series

VALVE SPRINGS

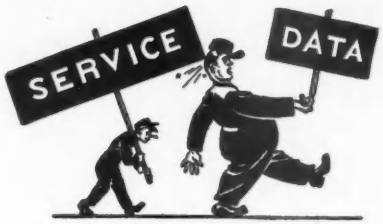
MODEL		Valve Open		Valve Closed	
		Pressure (Ave.) Pounds	Length Inches	Pressure (Ave.) Pounds	Length Inches
BX, ZX Series		35	1 3/4	22	1 1/8
NX, IX-3, IX-5 Series		42	1 5/8	21	1 1/8
OO, JX Series		58	1.594	43	1.920
K, L, G, E Series		73	3 1/16	59	3 3/16
TX Series		100	3 5/8	73	3 3/4
QX Series	*	41	1 5/8	17	1 31/32
	**	37	1.281	19	1.656
QX, WX, WXL, YX, RX, RXL Series		102	2 5/8	50	2 13/16
HX Series	O.	84	3 5/8	47	3 5/8
	I.	45	2 13/16	27	3 1/4
DIX, DOO, DJX Series	O.	55	1.406	31	1.781
	I.	37	1.281	19	1.656
DRX Series	O.	48	1.449	27	1.844
	I.	30	1.355	17	1.780
DHX, DFX Series	O.	94	2 11/16	55	3 11/16
	I.	57	2 11/16	32	3 5/8

I—Inner O—Outer

TENSIONS

ENGINE MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
JX Series	75	*60 **70	52
WX Series	60	*70 **105	105 ††53
YX, RX Series	75	*105 **123	105 ‡115
RXL Series	80	175	158 †123
HX Series	105	*193 **210	263
DOO Series	158	*77 **95	140
DJX Series	158	*77 **95	140
DWX Series	158	175	158
DRX Series	5/8"-175 1"-280	175	158
DHX Series	11/16"-175 1 1/2"-350	*193 **210	263
DFX Series	300	260	263

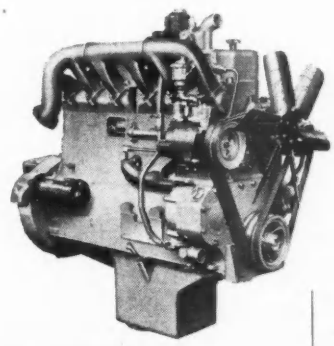
*Center and Rear. **Front and Intermediate.
††Connecting Rod 7/16 in. †Babbitt.
‡Connecting Rod 9/16" in.



TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
ZX Series			15–1000	5°A	Var	.006	.006	.006		Opt		.025	.020	N	N	Opt
IX Series			15–1000	5°A	Var	.006	.006	.006		Opt		.025	.020	N	N	Opt
OO Series			15–1000	5°A	Var	.006	.008	.012		Opt		.025	.020	N	N	Opt
QXA, QXB, QXC, QXD			26–1600	5°B	Var	.006	.006	.008		Opt		.025	.020	N	N	Opt
QXLD		6-3 7/16x4 1/4	26–1600	5°B	Var	.006	.008	.010		Opt		.025	.020	N	N	Opt
JXA, JXF, JX6, JXE3, JXB, JX6, JXD			26–1600	5°A	Var	.010	.008	.010		Opt		.025	.020	N	N	Opt
JXLD		6-4x4 1/4	35–1600	5°B	Var	.010	.010	.010		Opt		.025	.020	N	N	Opt
WXC, WXC2			26–1600	2°A	Var	.010	.006	.010		Opt		.025	.020	N	N	Opt
WXC3		6-4 1/4x4 1/2	26–1600	2°A	Var	.010	.006	.010		Opt		.025	.020	N	N	Opt
WXLC		6-4x4 1/4	26–1600	2°A	Var	.010	.006	.010		Opt		.025	.020	N	N	Opt
WXLC3		6-4 1/4x4 1/4	26–1600	2°A	Var	.010	.006	.010		Opt		.025	.020	N	N	Opt
YXC		6-4x4 1/4	26–1600	2°A	Var	.010	.010	.016		Opt		.025	.020	N	N	Opt
YXC2		6-4 1/4x4 1/4	26–1600	2°A	Var	.010	.010	.016		Opt		.025	.020	N	N	Opt
YXC3		6-4 1/2x4 1/4	26–1600	2°A	Var	.010	.010	.016		Opt		.025	.020	N	N	Opt
RXB		6-4 1/4x5 1/4	26–1600	2°A	Var	.010	.010	.016		Opt		.025	.020	N	N	Opt
RXC		6-4 1/2x5 1/4	36–1600	2°A	Var	.010	.010	.016		Opt		.025	.020	N	N	Opt
RXLC		6-4 1/2x5 1/4	36–1600	2°A	Var	.010	.010	.016		Opt		.025	.020	N	N	Opt
RXLD		6-4 1/2x5 1/4	36–1600	2°A	Var	.010	.010	.016		Opt		.025	.020	N	N	Opt
HXB		6-5x6	35–1600	5°B	Var	.015	.010	.016		Opt		.025	.020	N	N	Opt
HXC		6-5 1/4x6	35–1600	5°B	Var	.015	.010	.016		Opt		.025	.020	N	N	Opt
HXD		6-5 1/2x6	35–1600	5°B	Var	.015	.010	.016		Opt		.025	.020	N	N	Opt
HXE		6-5 1/2x6	35–1600	5°B	Var	.015	.010	.016		Opt		.025	.020	N	N	Opt
DJXB		6-3 1/2x4 1/2	45–2000	12°B	Var	.010	.010	.010		Die sel						Opt
DJXC		6-3 1/2x4 1/2	45–2000	12°B	Var	.010	.010	.010		Die sel						Opt
DRXB		6-4 1/2x5 1/4	30–1200	12°B	Var	.016	.016	.016		Die sel						Opt
DRXC		6-4 1/2x5 1/4	30–1200	12°B	Var	.016	.016	.016		Die sel						Opt
DFXB		6-5x6	50–1200	5°B	Var	.015	.010	.016		Die sel						Opt
DFXC		6-5 1/4x6	50–1200	5°B	Var	.015	.010	.016		Die sel						Opt
DFXD		6-5 1/2x6	50–1200	5°B	Var	.015	.010	.016		Die sel						Opt
DFXE		6-5 1/2x6	50–1200	5°B	Var	.015	.010	.016		Die sel						Opt

N—Varies with compression ratio



WAUKESHA

Service specifications for models 6BZ, 6MZ, 6MZA, 6SRKR and 140G, 140H, 145G, 145H series

TUNE UP

MODEL	Standard Engine Make and Model	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
	130HS	4-3 1/4x5	30–1500	10°A	3A	.012	.009-11C	.014-16C	Opt		18mm	.025	.018	16°B(1		130
	130HL	4-4x5	30–1500	10°A	3A	.012	.009-11C	.014-16C	Opt		18mm	.025	.018	16°B(1		130
	6BZ	6-4x4 1/4	40–1500	5°A	1 1/2A	.010	.010-12C	.014-16C	Opt		18mm	.025	.010	Var		112
	6MZA	6-4 1/4x4 3/4	40–1500	8°B	3B	.008	.008-10C	.018-21C	Opt		18mm	.025	.018	Var		110
	140HS	6-4 1/4x5 1/4	40–1500	5°A	1 3/4A	.010	.010-12C	.016-18C	Opt		18mm	.025	.018	16°B		130
	140HK,140GK	6-4 1/2x5 1/2	40–1500	5°A	1 3/4A	.010	.010-12C	.016-18C	Opt		18mm	.025	.018	16°B(1		130
	6SRKR	6-4 1/2x5 1/2	40–1500	8°A	3A	.004	.008-10C	.024-26C	Opt		3/8	.025	.018	Var		90
	145HK,145GK	6-5 1/4x6	40–1500	5°A	2A	.006	.009-11C	.024-26C	Opt		18mm	.025	.018	16°B(1		130
	145GZ	6-5 1/2x6	50–1500	5°A	2A	.006	.009-11C	.024-26C	Opt		18mm	.025	.018	Var		130
	6WAK	6-6 1/4x6 1/2	40–1500	TC	TC	.012	.018-20C	.025-27C	Opt		18mm	.025	.018	Var		85
	6WAKH	6-6 1/4x6 1/2	40–1500	TC	TC	.012	.018-20C	.025-27C	Opt		18mm	.025	.018	17°B		125
	6WAKD	6-6 1/4x6 1/2	40–1500	TC	TC	.012	.018-20C	.025-27C			Die sel					450

(1)—Timing as for H models. Spark for G models variable

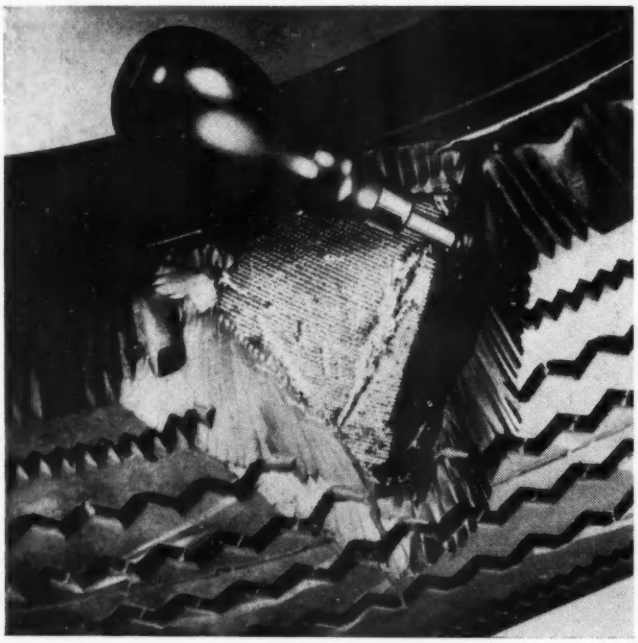
TENSIONS

MODEL	Cylinder Head (pounds-feet)	Main Bearings (pounds-feet)	Connecting Rod Bearings (pounds-feet)
6BZ	73–75	88–92	67–69
6MZA, 6MZR	73–75	96–100	67–69
6SRKR	73–75	129–133	121–125
130HS, 130HL	96–100	109–113	67–69
140GK, 140GZ, 140HS, 140HK	130–134	130–134	121–125
145GK, 145HK	130–134	242–250	73–75
6WA Series	146–150	242–250	88–88

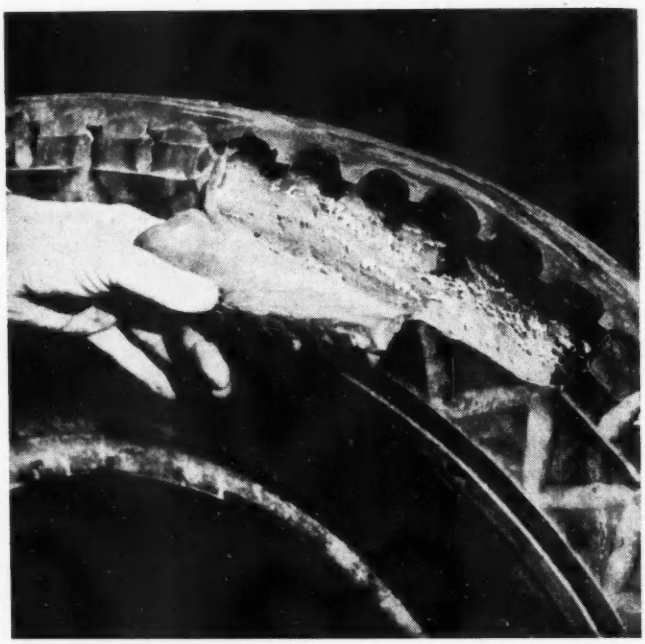
VALVE SPRINGS

MODEL		Valve Open		Valve Closed	
		Pressure (Ave.) Pounds	Length Inches	Pressure (Ave.) Pounds	Length Inches
6BZ		110	1 3/4	61	2 1/16
6MZ, 6MZA		101	1 31/32	64	2 11/16
6SRKR		101	2 23/64	66	2 49/64
140GK, 140HS, 140HK	O.	86	1 31/32	31	2 3/16
	I.	55	1 7/16	26	1 15/16
145GK, 145HK	O.	118	2 3/16	48	2 31/32
	I.	81	2 1/16	32	2 31/32

I—Inner O—Outer



Extensive ply separation cannot be repaired with any degree of success. Manufacturers recommend that such casings be discarded



Tread separation is usually accompanied by cord separation and breakage, and is usually considered irrepairable by tiremen

Practical Pointers on

TIRE REPAIR Practices

Casing inspection procedures, methods of determining repairable from irreparable casings. Suggestions for laying out and equipping tire department

IN THE INTEREST of fleet economy, safety and efficient operation, every fleet operator should make it his business to know *how* and *when* to repair injured tires. He should become familiar with good repair methods and insist upon high standards in repair work as the first step in improving reclaimed tire mileages. Along with when to repair, he should know what type of repair to apply to characteristic injuries, when to discard and when to order a recap.

While many fleets do not have their own tire shops as yet, they can still profit from a study of approved tire repair practices so that they will know a good job when they see it. The points outlined in this article can be applied to the fleet's own repair programs—or they can be used as a criterion for checking on repair work when it is sent out.

Tire Inspection

THERE is no substitute for thorough, intelligent inspection of the casing before repair proceedings are undertaken. It is advisable to place a competent tireman in charge of inspections, and it is imperative that he employ an approved system for checking—and that this procedure be strictly adhered to with every tire.

Whether tire repairs are to be made by the fleet or sent out, every shop should have a tire spreader, either hand, pneumatic or hydraulically-operated, for tire inspections. The spreader should be located in a spot with adequate floor space and an abundance of light. While on the spreader, the casing should be carefully inspected for breaks, cuts, loose shoulders, deep radial cracks, and ruptured, broken or dry cords—all conditions which will require special attention before the tire is repaired or recapped.

When injuries are located, they

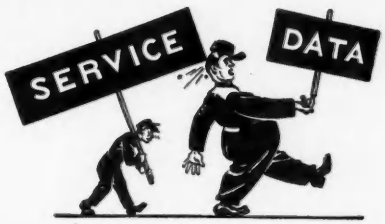
(TURN TO PAGE 60, PLEASE)



Diagonal breaks extending from bead to bead render the tire unfit for repair. Few fabric breaks are repairable

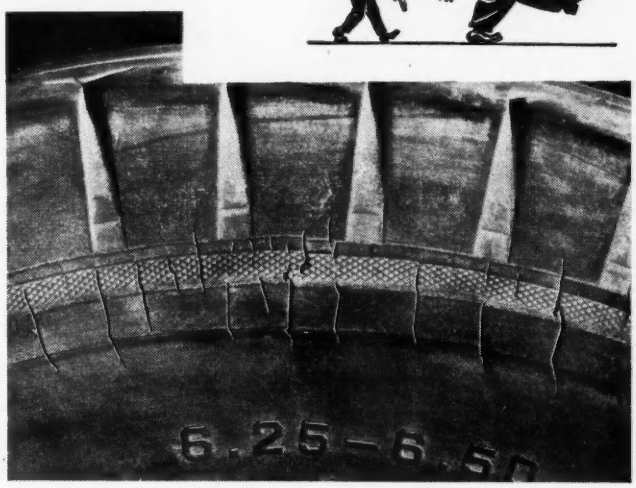


Tires with broken beads or with projecting wires or loosened fabric are not considered salvageable by tiremen





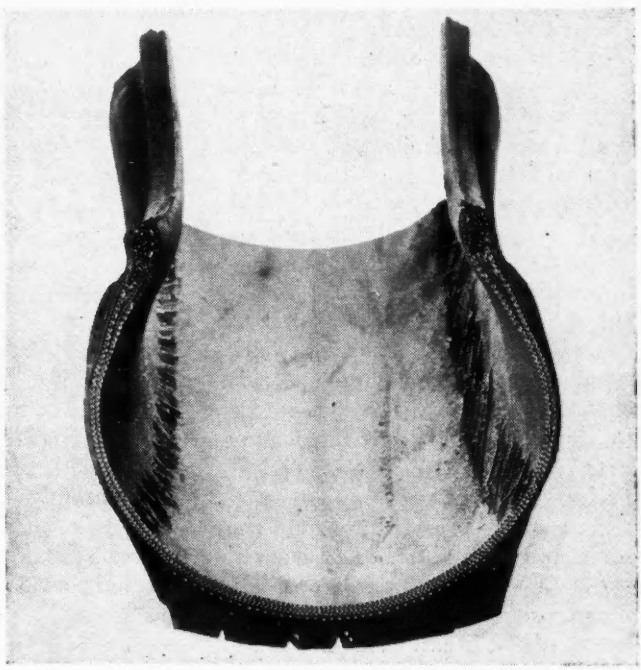
Casings showing evidence of deterioration and inside fabric separation should be discarded as repair is impractical



Tires with more than three radial cracks or with radial cracks extending into the carcass should not be repaired



Tires which have treads worn through to the fabric in several spots or with wear through two plies are worthless



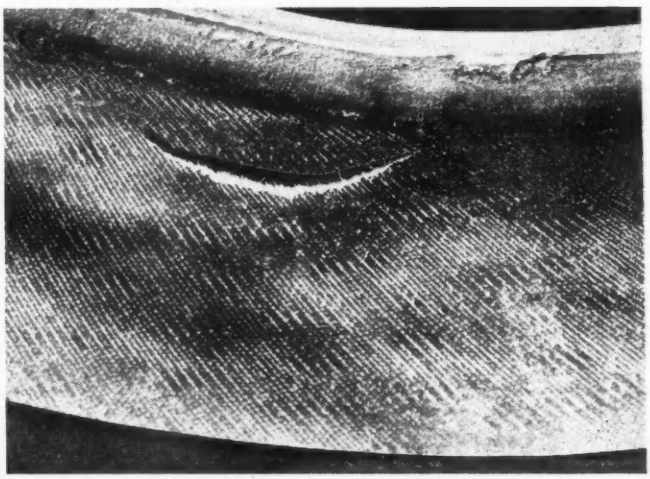
Tires with fabric breaks along one or both sidewalls have been run under-inflated and damaged beyond repair

. . . TIRE REPAIR Practices

(Continued from Page 59)



Extensive cord breaks, usually caused by overloading, render the tire unfit for repair. Other cord separation is probable



Tires with breaks extending into the reinforced bead area are not repairable as reinforcement will cut flexing ability

should be probed to determine the extent of the damage and if ply separation exists. Nailholes, if any, should be probed and marked for treatment later. The interior of the casing should be closely examined for discoloration. Dark or off-color streaks on the bandply opposite or slightly below the shoulder area may indicate some former abuse such as overloading or underinflation.

All temporary patches should be removed as many an injury, large enough to require a section repair, lies beneath a nailhole patch installed to prevent a tube being damaged in an emergency.

All tires should be examined on the outside for signs of age and deterioration. Weather checks in the sidewalls and shoulders, as well as chafed beads and flaking sidewalls, usually denote this condition. Beads should be examined for damage due to rim cutting, improper mounting or other causes. Nailholes should be probed carefully and foreign material removed prior to repair. The same holds true of tread and sidewall cuts. When these conditions are found, probing will usually show the extent of the break, and the advisability or inadvisability of making a repair.

Casings should be checked carefully for internal cord separations. Expert tiremen sound a casing with a tire iron, or short length of pipe, to tell whether there is cord separation. A dull thud will denote cord separation. A perfect casing will give a ringing sound.

Tread separation around cracks or cuts in the outside surface can be located by slightly spreading the tire and probing the break with an awl. Bulges, either outside or inside, will reveal tread or ply separation or broken cords. Sometimes tread separation can be detected by the sound of the rasp on the tread, a squashy sound indicating a loose section.

Recappable Tires

AFTER inspection, the next problem of the tireman will be whether to repair or recap. For maximum economy, manufacturers recommend that tires be recapped when worn to a point where 1/8 to 1/16 of the tread design at the shoulder remains. At this point the tire has given 75 to 85 per cent of its normal tread life, and the remaining rubber will provide a solid foundation for application and will afford the greatest protection to the tire cords by providing sufficient layer of under tread to protect it against road shocks. Recapping at this time assures that the original breaker cushion will not be disturbed.

Tires can be recapped after the breaker strip has been exposed, but in this case it will be necessary to remove all the old rubber as well as the breaker strip and replace with a full retread—necessitating a more costly repair.

Why Recaps Fail

MANUFACTURERS have attributed most of the failures of recapped tires to the following causes, and the fleet operator will be wise to consider these points carefully, as he can control most of the factors improving tire service.

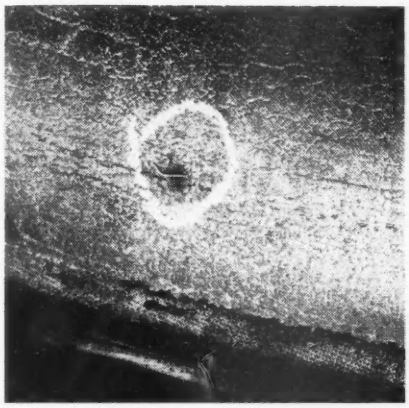
1. Improper selection and inspection of the casing.
2. Poor workmanship in the repair or the final recap.
3. Failure of the operator to consider the limitations of a repaired tire.
4. Use of poor equipment, out-of-



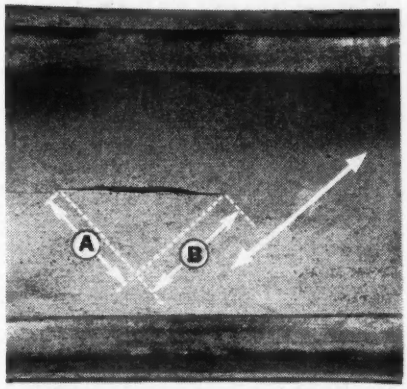
Proper inspection requires that the tire be spread on a machine and all defects checked, probed and marked



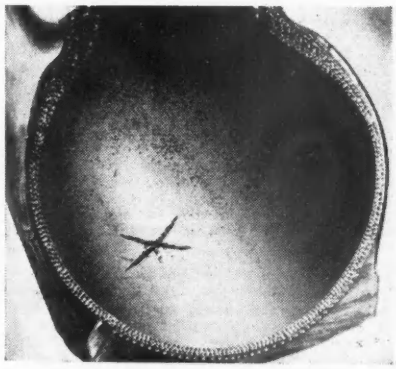
Special precautions should be taken to locate weather checks and other signs of unsalvageable carcasses



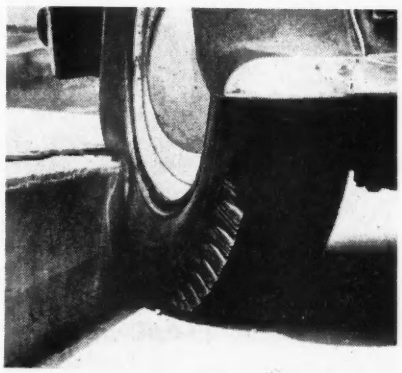
All defects should be marked with chalk as they are found. Cuts should be probed to check for tread separation



Width of injury is determined by measuring across injured cords. Length is determined by measuring with the cords



A small inside cut may indicate a sharp blow that damaged the cords. The inside of casing should be checked here



Low air pressure, curb bumping and sharp blows cause injuries that will necessitate a careful inspection procedure

date equipment or inferior recap methods.

5. Use of inferior materials in reclaiming the casing.

Repairable Casings

THE tire inspection procedure will reveal many conditions in a casing which will make satisfactory repairing questionable. The following comments on injuries that can be repaired profitably by the average shop should be used as a guide—but the fleetman should remember that many factors characteristic of his own operation will affect repair advisability. Generally, it is assumed that the following conditions can be repaired for many extra miles of service:

RIM BRUISES—When less than 2 in. in length, rim bruises can be repaired satisfactorily. In this case, the sidewall rubber and the chafer strip around the rim bruise should be removed and the injury treated as a sectional repair.

RADIAL CRACKS—In the early stages, radial cracks usually can be repaired. Under these conditions repairability will be determined by other factors, such as age of the tire, costs, service, etc.

NAIL HOLES—Small nail holes are repairable. These should be cleaned with a rat-tail file, filled with cushion gum and reinforced with a small 2-ply patch. Such an injury is cured as a spot repair.

BLISTERS—Small sand blisters, the result of either neglected cuts or loosened sidewall rubber, can be repaired in the same way as sidewall cuts—in a sectional mold.

CUTS—Large tread or sidewall cuts through the cord body can be repaired profitably if the failure is not more than 50 per cent of the cross section of the tire. In considering the measurements of an injury, it is well to determine the width as well as the length. The limiting factor should be the loss of cord-body strength. While a diagonal cut may be repaired safely under these conditions, an injury of the same length, but with many cords cut in the opposite direction, would be extremely hazardous. Therefore, as the width of the injuries increase, the length of those injuries accepted for repair should be reduced if success is to be assured.

TREAD SEPARATION—Tires with minor separation between the carcass and the tread can be repaired and recapped. Under these conditions, the injury should be first trimmed out and the area repaired on the spot press.

Those tires which have treads worn through to the fabric in several spots can be repaired and retreaded—providing the wear has not damaged more than two cord plies.

Tires requiring sectional repairs

(TURN TO PAGE 142, PLEASE)

WEAR LIMITS of Axles, Brakes



WEAR limits of parts are useful not only in extending the life of parts, but in avoiding or safely postponing until really necessary countless major overhauls.

In these pages, Commercial Car Journal is expanding the wear limits data heretofore published. Also, new data on valve and seat wear have been added. All information has been obtained from automotive engineers and maintenance experts of some of the industry's leading replacement parts manufacturers. In each case, the guiding factor has been safety. Use beyond the limits given is considered unsafe.

It should be emphasized that these are factory recommendations, undoubtedly based on a broad cross-section of field experience. Since fleet operations differ widely in character, fleet maintenance men doubtlessly will prefer to experiment with the factory recommendations before deciding on limits which are more realistically applicable to their own peculiar operations.

Bearings

FEDERAL-MOGUL CORP.

TOLERANCES

CRANKSHAFT—A shaft worn to the extent that the bearing surfaces are ridged and scored, is unfit for use and must be reground.

Journals: Should not be more than .003 in. out-of-round.

Crankpins: Should not be more than .002 in. out-of-round. If main journals or crankpins exceed these tolerances, the shaft is unfit for further use and must be reground.

CRANKCASE—Bearing Saddle Bores: Must be round within .002 in. and in true alignment lengthwise for use with precision insert main bearings.

MAIN BEARINGS—Spread (width across the open ends) should exceed the crankcase bore diameter by .005 in. to .020 in., depending on the thickness and structural stiffness of the bearing.

CONNECTING RODS—Crankpin bearing bore and the piston pin bushing bore must be parallel with each other within .001 in. in 6 in., and the twist between these bores must not exceed .001 in. in 6 in.

Rod Bore: Must be round within .002 in.

Rod Bearings: Spread (width across the open ends) should exceed the rod bore diameter by .005 in. to .020 in., depending on the thickness and structural stiffness of the bearings. The Ford V8 rod bearings are exceptions to this rule.

CAMSHAFT BEARINGS—After an engine has used up two sets of main and connecting rod bearings, the camshaft bearings are a potential source of trouble due to wear and should be replaced.

OIL CLEARANCES

Recommended crankshaft end clearance at thrust bearing and connecting rod end clearance:

Diameter Crankshaft Journal	Recommended End Clearance
2 to 2¾ in.	.004/.006 in.
2 13/16 to 3½ in.	.006/.008 in.
Over 3½ in.	.008/.010 in.

MAIN and CONNECTING ROD BEARINGS: Oil clearances for pressure (force feed) lubrication are recommended as follows:

Dia. of Crankshaft Journal or Crankpin	Tin Base Babbitt or Bermax High Lead Babbitt	Genuine Cadmium Silver Copper	Federaloy B-30 Copper Lead
2 to 2¾	.0015	.0020	.0025
2 13/16 to 3½	.0025	.0030	.0035
3 9/16 to 4	.0030	.0035	.0040

Note A: A tolerance of Plus .001 in. is allowable on the clearances specified.

Note B: Oil clearance as shown in this chart is the difference in the diameter of the crankshaft journal or crankpin and the bore diameter of the bearing.

Eaton Front and Rear Axle

The axle division of Eaton Mfg. Co. has submitted valuable information on wear limits for its line. The data covering both front and real axles will be found in the table below.

Dimensions given are a fair average of the entire line

PARTS	SPECIFIED FIT OR CLEARANCE	SERVICEABLE AFTER WEAR
Gear mesh, bevels—backlash	.008 to .015	.018
Herringbone mesh—backlash	.010	.015
Gear mesh—differential backlash	.010 max.	.015
Bearing fit—cones where free—Pinion End	.001 loose to .0005 tight	Loose – .002
Bearing fit—cones where free—Housing Tube	.0002 to .0017 loose	Loose – .002
Bearing fit—cones where free—Front Axle inner wheel brg.	.0005 to .0015 loose	Loose – .002
Bearing fit—cones where free—Front Axle outer wheel brg.	.0005 to .002 loose	Loose – .003
Bearing fit—cups where free—Diff. Brgs. L. H. and R. H. Side	.005 tight to .0015 loose	.002
Differential side pinion and spider	.002 to .004 loose	.006
Side gear in differential case	.004 to .007 loose	.009
Internal gear idler pinion and pins	.0045 to .0065 loose	.009
King pin fit in I-beam	.000 to .0015 loose	.002
King pin fit in knuckle bushings	.0005 to .002 loose	Loose – .003
Differential washers back of gear	.002 loose to .008 loose	Loose – .010

CLAWSON AND BALS, INC.

Excerpted from the "Engine Bearing Manual." All measurements must be taken with the utmost care and must be accurate to the nearest .0002 in.

TOLERANCES

PRECISION INSERT BEARINGS

Elongation of Bearing Bore: In some cases the bore for the insert bearing may be elongated. If this exceeds .002 in., the rod should be exchanged for a new or reconditioned one.

Rod Alignment: Rods may be bent or twisted. If the center line of the crank pin hole and piston pin hole are not parallel within .001 in. in 6 in., they should be aligned.

CRANKSHAFT BEARINGS

To be usable as it is, the shaft must be round within .003 in. or less at each of the main journals, and the diameter will be within .001 in. of the original diameter. The crank pin journals should be round within .002 in., and the diameter must be within .001 in. of the original. To check, a brass shim clamped between the shaft and the bearing (.001 in. thicker than the recommended oil clearance) should lock the shaft. If saddle bores are more than .002 in. or more out of round, semi-finished bearings of sufficient undersize should be used.

OIL CLEARANCES

The general rule for the size of the oil clearance, for pressure lubricated bearings, is to allow .001 for each inch of journal diameter, subject to modification depending upon the bearing metal alloy used, i.e.:

TYPE OF BEARING	SHAFT DIAM. 2 to 2¾ in.	SHAFT DIAM. 3 9/16 to 4 in.
Titan ring true		
Tin base babbitt	.0015 to .0025	.0025 to .0035
Cadmium	.002 to .003	.003 to .004
Copper-Lead	.0025 to .0035	.0035 to .0045

TYPE OF BEARING	SHAFT DIAM. 2 13/16 to 3½ in.
Titan ring true	
Tin base babbitt	.003 to .004
Cadmium	.0035 to .0045
Copper-Lead	.004 to .005

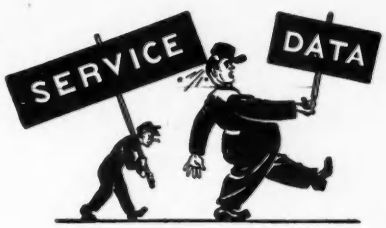
END CLEARANCES

For the rods, it is sufficient to be sure that the fillet at the ends of the crank pin does not bind on the end of the crank pin bearing. A clearance of .004 in. to .010 in. is recommended.

For the crankshaft, end play or clearance is recommended as follows:

DIAMETER CRANKSHAFT JOURNALS (IN.)		
2 to 2¾	2 13/16 to 3½	3½ plus
CRANKSHAFT END CLEARANCE (IN.)		
.004 to .006	.006 to .008	.008 to .010

and Engine Parts



Pistons and Rings

AMERICAN HAMMERED

PISTON RING CLEARANCES

Note: In many cases engine manufacturers specifications will vary from those given below and these specifications should be followed where available. In the absence of the engine manufacturers' specifications the following specifications will prove of value.

END CLEARANCE 90 DEG. STRAIGHT CUT JOINT

Ring Diameter	Recommended		Serviceable	
	Minimum	Maximum	Minimum	Maximum
2 1/16–3 3/64 in.	.010 in.	.020 in.	.010 in.	.040 in.
3 1/16–4 3/64 in.	.015 in.	.025 in.	.013 in.	.045 in.
4 1/16–5 3/64 in.	.020 in.	.030 in.	.016 in.	.050 in.
5 1/16–6 3/64 in.	.020 in.	.030 in.	.019 in.	.050 in.

Piston ring end clearance should always be measured at the smallest part of the cylinder bore, usually at the bottom of the cylinder below the ring travel. If ring clearance is in excess of the maximum serviceable clearance a ring .010 in. larger in diameter should be used and the end clearance adjusted.

CYLINDER WEAR

Any cylinder that is worn or tapered .015 in. or more should be rebored even though the rings are designed to operate in much greater tapers. Maximum out-of-roundness permissible is .005 in. If the cylinder has holes or pockets or waves which are more than .001 in. deep, or a ridge at the bottom of the ring travel area, the cylinder should be rebored.

SEALED POWER CORP.

CYLINDER WEAR

Sealed Power individually Engineered Ring Sets with expander type cast iron oil rings are recommended for use in engines with cylinders tapered up to .006 to .008 in.

The Individually Engineered Sets with expander type steel oil segment oil rings are recommended for use in engines with cylinders tapered from .008 to .015 in. Beyond .015-in. taper, reboring is recommended.

RING TO GROOVE CLEARANCE

Clearance between new ring and ring groove should not be less than .0015 in., and not more than .004 in. Provided pistons are not cracked or defective in any way, they can be salvaged by having the worn ring groove machined and fitted with GI-60 inserts. In engines where the top ring groove is known to wear excessively, GI-60 inserts should be installed in replacement pistons.

PISTON TO CYLINDER FIT

If the piston skirt diameter is such that the clearance between it and the smallest diameter of the cylinder is 1 1/2 times as much as the clearance recommended by the manufacturer, the pistons should be resized. Pistons should always be resized before piston pin holes are reamed for replacement pins.

THE PERFECT CIRCLE CO.

RING GROOVE WEAR

If it is possible to insert a feeler gage more than .006 in. thick between the outer edge of the top ring land and 1/16 in. in from the face of the land, the piston should be replaced.

RING GAP CLEARANCES

Whenever obtainable, specific recommendations from the engine manufacturer should be used. In general, the following specifications are satisfactory: To and including 3 1/2-in. bore—minimum gap, .007 in. 3 9/16 to 4 3/8-in. bore—minimum gap, .010 in. 4 7/16 to 5 1/4-in. bore—minimum gap, .013 in.

Ring gaps less than the above specifications may cause the rings to scuff or break.

RING TO LAND FIT

With the new compression ring installed in its groove and the face of the ring flush with the face of the ring land, it should be possible to insert a .0015-in. feeler gage beside the ring completely to the bottom of the groove. Oil rings should be free in the groove.

McQUAY-NORRIS MFG. CO.

PISTON RING END CLEARANCE

Diameter	Minimum End Clearance
2 1/8-2 3/8 in.	.007 in.
2 1/2-2 3/4 in.	.008 in.
2 7/8-3 1/8 in.	.009 in.
3 1/4-3 3/8 in.	.010 in.
3 1/2-3 3/4 in.	.011 in.
3 7/8-4 in.	.012 in.

PISTON RING SIDE CLEARANCE

Aluminum Pistons: .0015-.002 in., top groove; .001-.0015 in., lower grooves.

Gray Iron Pistons: .002-.0025 in., top groove; .0015-.002 in., lower grooves.

PISTON CLEARANCE

Cam "A"—Chevrolet Six cast iron pistons must be cam ground with cam "A." Any cast iron piston in the automotive range can be cam ground with cam "A" at the option of the user. Use the following clearances when finishing either round or with cam "A":

Cyl. diam.	3	3 1/4	3 1/2	3 3/4	4
All lands	.012	.013	.014	.015	.016
Skirt	.003	.00325	.0035	.004	.0045
Cyl. diam.	4 1/4		4 1/2	4 3/4	5
All lands	.017		.018	.019	.021
Skirt	.00475		.00525	.00575	.00625



"And how many pints of sheer adventure will you have this Spring, Miss Smith?"

Cam "B"—Ford "A" and "V8" pistons, and all pistons of the all-aluminum type having a split skirt completely open from top to bottom, use cam "B." Any Nelson wide strut or narrow strut Bohnalite piston can be cam ground with cam "B" at the option of the user. Use the following clearances when grinding round. Skirt clearance should be cut in half when using cam "B":

Cyl. diam.	3	3 1/4	3 1/2	3 3/4	4
All lands	.020	.021	.023	.025	.027
Skirt	.00225	.0025	.00275	.00325	.0035
Cyl. diam.	4 1/4		4 1/2	4 3/4	5
All lands	.030		.033	.036	.039
Skirt	.00375		.004	.00425	.0045

Cam "C"—Must be used on all T-slot or U-slot flexible skirt all-aluminum pistons, having a solid section at bottom of skirt, from 2 3/4 to 3 7/16 in. diameter.

Cam "D"—Must be used on all T-slot or U-slot flexible skirt all-aluminum pistons, having a solid section at bottom of skirt, from 3 1/2 to 4 15/16 in. diameter.

Use the following clearances with both cam "C" and "D":

Cyl. diam.	3 1/4	3 1/2	3 3/4	4
All lands	.021	.023	.025	.027
Skirt	.00175	.002	.00225	.0025
Cyl. diam.	4 1/4		4 1/2	4 3/4
All lands	.030		.033	.036
Skirt	.00275		.003	.00325

Cam "E"—Must be used on Nelson Autothermic pistons. Same shape as cam "B" but with .013 in. drop at pin which is necessary because of the solid skirt.

CYLINDER WEAR

Where the cylinder taper does not exceed .005 in., the so-called rering job will generally give satisfactory results with conventional compression and oil rings, such as our Factory Type set or Rebore-Rebuild set.

Where the cylinder taper is in excess of .005 in. —and if it does not exceed .010 in.—and it is impractical to recondition the engine, a rering job will generally give satisfactory results with spring type rings, such as our Leak-Proof set.

Where the cylinder taper is more than .010 in. or the out-of-roundness is more than .003 in., it is advisable to recondition the engine and install new pistons.

PISTON PIN FIT

Pin fits naturally depend upon the condition of the pin hole. The more accurately a pin hole is finished the looser the pin will feel with the same clearance. The fits specified below cover an average condition.

Piston pin to con-rod clearance: this should be a drop fit in full floating or set screw type pins.

PIN TO PISTON CLEARANCE

	Oscillating	Full Floating	Set Screw
Cast Iron—Bushed	Thumb fit	.....	.....
Cast Iron—Not Bushed	Free drop	Light drive fit	Light drive fit
High silicon	Thumb fit	Thumb fit	Light drive fit
Other aluminum	Palm fit	Light drive fit	Light drive fit

(Turn to Next Page, Please)

WEAR LIMITS

Of Axles, Brakes and Engine Parts

(Continued from Page 63)

Pistons and Rings

RAMSEY ACCESSORIES MFG. CORP.

PISTON RING CLEARANCE

End Clearance: The general rule is to allow .004 in. per inch cylinder diameter for rings in the top groove. Allow .003 in. per inch diameter for rings in the lower grooves. Rings must always be fitted to the smallest part of the cylinder, usually just below the ring travel. In newly reconditioned cylinders, the rings may be fitted at any convenient point.

CYLINDER WEAR: TAPER WEAR LIMIT

Cylinder out-of-round: Ramco rings are recommended to take care of taper up to .015 in. and eccentricity up to .003 in. However, many users use them successfully in cylinders in worse condition.

PISTON RING SIDE CLEARANCES

Clearance recommended for the piston rings in the groove is 0.001 to 0.0015 in. This can be measured with a feeler gage.

PISTON PIN FITTING

Because most of the combustion heat of the piston is transferred to the wrist pin through the wrist pin bosses, it is essential that the car manufacturer or piston manufacturer wrist pin fitting specifications be adhered to.

Valve & Seat Wear

THOMPSON PRODUCTS, INC.

Valve seat runout, .003 max.
Valve seat width, +1/32-1/64 from factory spec.
Valve seat angle, blue or lapp for matched faces.
Valve stem warpage, .003 max.
Valve stem length, ±1/32 on tip below lock.
Valve tappet to bore clearance, +.002 from factory spec.
Valve stem to guide clearance, intake, +50 per cent from factory spec.
Valve stem to guide clearance, exhaust, +50 per cent from factory spec.
Valve guide taper, +.002 from factory spec.

TOLEDO STEEL PRODUCTS CO.

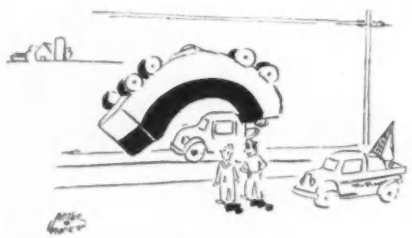
VALVE SEAT RUNOUT

Both the seat in the block or head, as well as the face of the valve itself should be checked by means of a dial indicator for runout. The valve seat should be concentric with the guide to within .0015 to .0025 total indicator reading. The valve face should be concentric with the stem to within .0025 to .003. Bent pilots and worn guides will give false readings. Replace guides not up to standard.

VALVE SEAT WIDTH

Valve seat widths will vary according to design and dimensions of the valve head, type of engine and conditions of operation. The general rule is a wide seat for a hot running engine and a narrow seat for a cool running engine for long valve life.

The valve seat width further is governed by the thickness of the valve head margin which is approximately 3/64 in. wide on most valves and after refacing should be at least 75 per cent of what it was originally. The thinner the margin, the wider the face.



You gotta get those brakes fixed Joe!

VALVE SEAT ANGLE

Valve seat angle should be within ½ deg. of that specified by the engine manufacturer. This should not be confused with the interference angle between the valve face and valve seat specified by some engine manufactures, i.e., valve face 46½ deg., valve seat 45 deg., interference of 1½ deg.

VALVE STEM WEAR

Valve stem wear should not exceed .001 in. under the original diameter. That portion of the valve stem below the valve lock groove is not a wearing surface and consequently can be used to measure the original diameter of the stem.

VALVE STEM TO GUIDE CLEARANCE

An old rule to follow is .00035 in. per .100 in. valve stem diameter, i.e., a valve stem having a .341 in. diameter should be fitted with approximately .0012 in. clearance. This would be the low limit and should not exceed .0022 in. Exhaust valve guide clearance should be approximately .0005 in. greater than intake.

VALVE GUIDE TAPER

Valve guide taper should not exceed .001 due to taper or uniform wear. Where design specifies a taper for the I.D. of the guide, would suggest that the above limit on wear be considered as the limiting factor.

All valve springs should be checked on a spring tension tester. The compression should be within 10 per cent of the factory limit. If otherwise, replace.

Valve Springs

Valve springs should be replaced if they fall 10 per cent below original specified rating or show any signs of corrosion.

Clutches

LIPE-ROLLWAY

Pressure plates badly scored or dished in excess of 0.015 in. should be replaced. Driving lugs of new pressure plates must fit freely in the slots of the flywheel ring with a clearance of 0.003-0.004 in.

BROWN-LIPE CLUTCH

PRESSURE PLATE

Maximum free movement in driving slots, .015 in.; maximum fulcrum wear, 1/32 in.; maximum depth of scores which permit salvage by regrinding, 1/16 in.; maximum depth of scores permitting reinstallation without grinding, .005 in.; maximum out-of-flat permissible without regrinding, .007 in.

LEVERS

To be scrapped if contact areas are pitted or grooved.

RELEASE SLEEVE

To be scrapped if total wear where levers contact is over 1/32 in. Clearance between bushing and shaft—maximum, .007 in.

SPRING

Percent load loss permissible before scrapping, 20 per cent.

DRIVEN PLATE

Replace if oil or grease on surface. Replace when worn to rivet heads. Replace if burned. Maximum play in disc splines measured at periphery, ⅛ in. If excessive spline wear occurs, check alignment between transmission and engine. Maximum free play at periphery due to damper parts, 1/16 in. (Scrap disc if more.) Permissible warpage: (Use indicator) face runout, .010 in.

COVER (FLYWHEEL RING)

Maximum total freedom of pressure plate in slots, .015 in.

RELEASE BEARING

Grease, High Temperature B.&RB.
Adjustment—by turning castellated adjusting ring to correct free pedal travel.

CLUTCH RELEASE SHAFT

Maximum play in bushings, .015 in.

TWO-PLATE CLUTCH

Same instructions as above apply plus following additions: Intermediate Drive Plate. Clearance on drive pins, as measured by peripheral play, .009 in. Scoring—maximum permitted same as pressure plate. Out-of-Flat—maximum permitted same as pressure plate.

Service Brakes

U. S. ASBESTOS DIV.
RAYBESTOS-MANHATTAN, INC.

The following working limits for better brake operation and care of Lockheed, Huck, Bendix and two-shoe cam-operated brakes, are recommended:

BRAKE DRUMS

Do not cut drum wall more than 1/32 in. on cars and light trucks; more than 1/16 in. on heavy trucks and busses. Drums should be discarded if deflection in diameter is more than .060 in. under full brake application.

Diameter should be concentric with hub within .010 in.

Surface: Refinish if worn or scored more than .010 in. or if heat checked.

Taper: Refinish if tapered or bell-mouth more than .010 in.

BRAKE SHOES

Cam Ends: Bendix shoes should be repaired (or discarded if this is not possible), if the cam end is worn or bent and if the anchor pin eye is worn at the small radius.

Rollers: Discard rollers that are worn, particularly if a flat spot is present on outside. Discard roller plates if grooved by the cam more than .015 in.

BUSHINGS

Anchor bushings should be replaced if worn more than .008 in. Anchors should be fitted and bushings accurately reamed.

ANCHORS

Pins: Anchor pin on the Huck brake is non-adjustable type, renew anchor if worn more than .008 in.

On the two-shoe cam operated brake and the Lockheed brake, renew anchor pins or rebush shoes if worn more than .008 in.

LINKS

Articulating links must be rigid and hold the shoes without side play. Examine springs and buttons and renew springs if weak. Applies to all Huck brakes.

CAM

On the two-shoe cam operated brake, camshaft should be renewed and bracket rebushed if worn more than .025 in.

SHOE TIPS & ROLLERS

On the two-shoe cam operated brake, shoe tips or rollers should be replaced if worn.

SPRINGS

All springs should be renewed if weak.

HYDRAULIC SYSTEMS

Wheel Cylinders: Dismantle and examine at each reline or if leaks are present. Renew pistons if scored, sticking, or worn more than .005 in. Replace cylinders if scored or if "no-go gage" will enter. Renew all rubber cups.

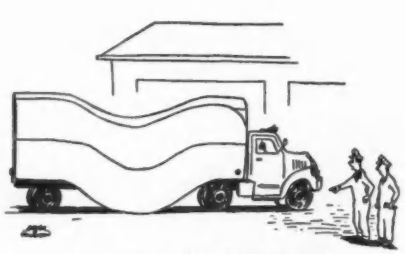
MASTER CYLINDERS

Check Valve: Pre-loading of lines should be 7½ to 12 lb. per sq. in. line pressure. Renew check valve if either of the seats are worn or misshapen or if small spring is weak or rusty.

Primary & Secondary Cups: Renew cups if distorted or if edges are rounded.

Main Spring: Renew spring if weak.

Piston: Renew if scored or worn more than .005 in. Make certain by-pass holes are open. Cylinder walls should be honed if scored. Use a "no-go gage" for measurement of cylinder diameter. If, after honing enough to remove all scores, the "no-go gage" will enter, master cylinder should be replaced.

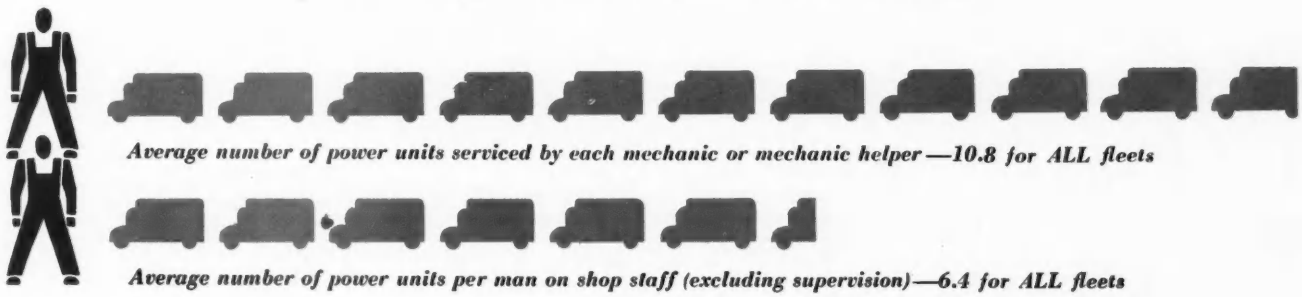


It's got the bellyache!

FLEET OPERATORS' EXPERIENCE HANDBOOK

SHOP PERSONNEL PRACTICES

as Reported by 500 Fleets



Average number of power units serviced by each mechanic or mechanic helper—10.8 for ALL fleets

Average number of power units per man on shop staff (excluding supervision)—6.4 for ALL fleets

Relationship of Shop Personnel to Number of Powered Units per Fleet

Fleets having 50 to 99 trucks, truck-tractors and passenger cars find that one mechanic is able to care for 7.1 units. Fleets of 100 units and over, average 12.5 power units per mechanic

Fig. 1

VOCATION	Fleets of 50-99 Power Units: Fleets Reporting	Power Units per Mechanic (inc. Helper)	Power Units per Man (Combined Personnel)	Fleets of 100 and More Power Units: Fleets Reporting	Power Units per Mechanic (inc. Helper)	Power Units per Man (Combined Personnel)
BAKERIES—Retail & Wholesale	23	16.7	8.4	14	23.1	12.4
BEVERAGE DISTRIBUTORS	10	14.9	8.2	3	33.0	20.5
COAL, COKE & ICE	3	11.9	8.6	2	21.7	14.4
COMMON CARRIERS—Over-the-road	19	6.2	3.1	16	9.8	4.9
COMMON CARRIERS—Local	10	13.4	8.7	10	12.8	7.6
COMMON CARRIERS—Local and Over-the-road	15	7.2	3.4	12	9.3	5.0
CONSTRUCTION—Builders, Quarries, Gravel	12	9.3	4.9	1	16.1	7.7
DAIRIES—Retail & Ice Cream	17	12.7	7.1	22	11.8	8.2
DEPARTMENT STORES	4	16.5	6.6	(No data on Fleets in this Category)		
FOOD DISTRIBUTORS—Over-the-road	7	9.6	5.1	1	16.4	14.3
FOOD DISTRIBUTORS—Local	3	18.4	9.2	2	30.6	15.3
FOOD DISTRIBUTORS—Local and Over-the-road	6	18.8	10.8	4	6.7	4.6
GOVERNMENT—State & County	44	7.3	4.1	30	9.4	6.1
GOVERNMENT—Federal	14	11.2	6.4	21	15.5	10.6
GOVERNMENT—Municipal	17	9.5	4.9	29	10.5	7.0
LAUNDRY & DRY CLEANING	4	18.7	11.8	3	21.7	10.3
NEWSPAPERS	2	9.4	6.3	2	16.2	10.5
PETROLEUM DISTRIBUTION	9	11.9	7.4	7	6.2	3.7
PETROLEUM PRODUCTION	3	14.2	9.2	1	7.1	7.1
PUBLIC UTILITIES—Gas, Water, Power	25	17.3	9.0	18	18.1	11.1
PUBLIC UTILITIES—Telephone	(Use outside shops for maintenance)			(Use outside shops for maintenance)		
TRUCK RENTAL	5	22.6	6.7	8	27.6	11.5
TRUCK & BUS FLEETS—Mixed	18	3.0	1.8	4	9.3	4.6
TOTAL & AVERAGE for All Vocations	247	7.1	4.1	192	12.5	7.7

Here Are a Few of the Many Questions Answered in This Personnel Survey

How many mechanics are required to keep my fleet running efficiently? . . . . . P. 65

What other personnel should I have? . . . . . P. 66

Should the shop foreman do maintenance work or devote his time to supervision, or both? P. 68

Is our shop's wage scale in line with the other fleet shops in this area? . . . . . P. 69

Should I supply mechanics and helpers with basic hand tools or should they supply own? P. 70

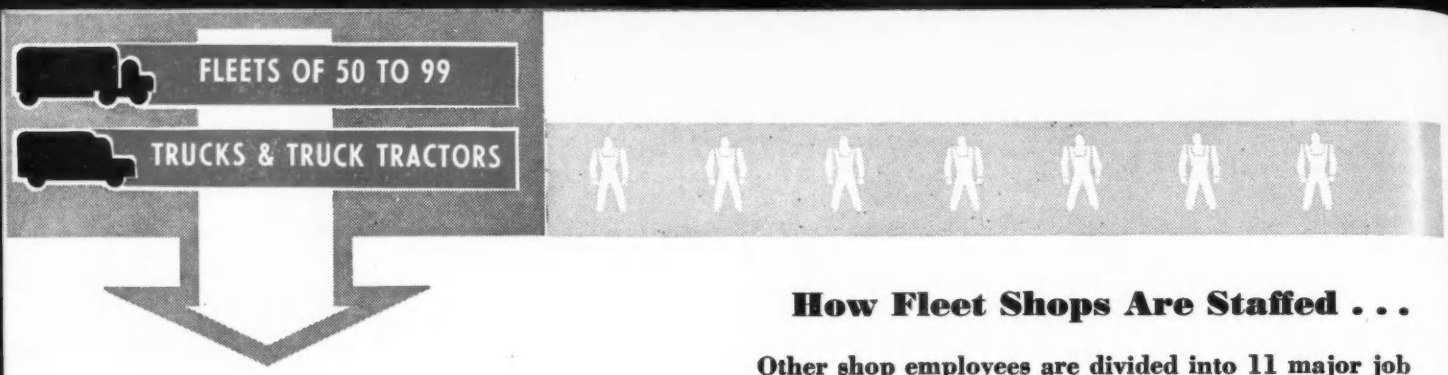
How many days of the week should the shop be in operation? . . . . . P. 72

Are the types of vehicles we use in line with the average fleet in our vocation? . . . . . P. 70

★ ★ ★ ★ ★

Fig. 1. This table can be used by any fleet for comparison with its own operation, but it represents only the picture found in 439 fleets answering the personnel question. Fleets have been separated into basic vocations, listed on the left, and according to size, as shown by the two groups at the top of the table. Other column headings show: How many fleets in each vocation replied to this part of the survey; the average number of powered vehicles—trucks, truck-tractors, and passenger cars—operated per mechanic or mechanic helper employed; the number of powered units per individual comprising the entire shop personnel, exclusive of superintendents and foremen. A comparison of both columns will show the prevailing ratio of mechanics to other personnel in the fleet maintenance shop. The total and average for all vocations, at the bottom of the table, shows the average number to be 7.1 power units per mechanic or mechanic helper and 4.1 power units per man of the entire shop personnel in the one group (50-99 power units) and 12.5 power units per mechanic or helper, and 7.7 power units per man of the combined shop personnel in the large fleets (100 and more power units). An interesting graphic picturization of this relationship for the entire industry, regardless of size, is shown at the top of the table.

SHOP PERSONNEL DATA



How Fleet Shops Are Staffed . . .

Other shop employees are divided into 11 major job

Fig. 2A

AVERAGE NUMBER OF SHOP PERSONNEL CONSIDERED ADEQUATE FOR FLEET OPERATION (Fleets having 50 to 99 Trucks and Truck-Tractors)

VOCATIONAL GROUPS (Fleets of 50 to 99 Trucks & Truck Tractors)	Number of Fleets Reporting	AVERAGE NUMBER OF UNITS IN FLEET: Average Number of Total Units	Average Number of Trucks and Truck-Tractors	Average Number of Trailers	Average Number of Passenger Cars	★ Total Personnel in Shop	Mechanics	Mechanic Helper	GI Apprentice	Machinist-Welder	Body and Fender Men	Tiremen	Greasemen	Washers	Porters	Painters	Partsmen	Bookkeepers	Other Shop Personnel
COMMON CARRIER GROUP—Local & Over-the-Road	47	121.5	64.8	52.4	4.3	17.0	6.8	1.9	0.7	0.6	0.8	1.9	1.3	0.8	0.3	0.6	0.6	0.5	0.2
FOOD DISTRIBUTION GROUP—Bakeries, Dairies, Meats and other Food Products	56	86.2	67.2	9.2	9.8	9.9	4.2	1.1	0.1	0.1	0.4	0.7	0.8	1.0	0.2	0.5	0.2	0.5	0.1
GOVERNMENT GROUP—State & County, Municipal, Federal	73	80.8	63.2	4.7	12.9	16.5	6.5	2.6	0.5	1.1	0.2	0.7	0.9	0.5	0.3	0.6	1.0	1.0	0.6
CONSTRUCTION—Builders, Quarries, Gravel	12	87.7	69.2	5.8	12.7	16.6	6.6	2.3	0.8	1.6	0.5	1.0	1.5	0.3	0.3	0.4	0.8	0.4	0.1
PETROLEUM GROUP—Private Carriers	11	112.2	65.2	15.1	31.9	10.5	5.1	1.5	0.1	0.4	0.1	0.4	0.5	0.6	0.5	0.5	0.4	0.6	.....
PUBLIC UTILITY GROUP—Gas, Power & Water	24	123.6	68.5	10.5	44.6	12.6	5.3	1.2	0.3	0.2	0.2	0.6	1.3	1.2	0.4	0.3	0.4	0.8	0.5
RETAIL DELIVERY GROUP—Other than food. Dry Cleaning, Laundry, Newspaper, Coal & Ice, Department stores, Beverage	23	75.8	62.7	5.3	7.8	8.9	4.1	0.8	.....	.....	0.2	0.4	0.8	1.2	0.2	0.2	0.2	0.5	0.3
TRUCK RENTAL	5	77.8	69.0	1.0	7.8	11.4	3.0	0.4	0.2	.....	0.8	0.7	0.9	2.1	0.1	0.2	0.4	1.4	1.2
TRUCK & BUS FLEETS—Mixed	19	220.6	210.7*	3.4	6.5	115.3	54.4	14.0	4.5	1.7	4.7	1.7	2.3	11.5	3.5	2.1	2.8	1.9	10.2
OVERALL AVERAGES	270	90.9	62.8	14.3	13.8	20.8	9.0	2.6	0.7	0.6	0.7	0.9	1.1	1.6	0.5	0.6	0.7	0.8	1.0

*Includes Buses



Fig. 2A, above, and Fig. 2B, next page, show the average number of men desired for each type of job in the shops of fleets having up to 99 trucks and truck-tractors, and fleets having 100 or over of these units. Fleets of similar operation have been grouped together into nine general vocational groups. The average number of trucks, truck-tractors, trailers and passenger cars operated by fleets in each vocational group is given as an indication of the relationship between operating units and shop personnel that the members of The Board of Experts believe should exist. Each of the figures in the personnel section of the tables is the number of men for the particular type of job listed at the top of each column. The personnel included in the "Other Shop Personnel" column are tool-crib men, gas and oil dispensers, and various types of specialists such as brake men, trailer body

CCJ's Board of Experts report on ratio of manpower to fleet size, hours, wages and other personnel problems

In comparing the information given in one table or graph with that given in another, it will be noticed that number of answering fleets in any particular vocation may vary. This apparent inconsistency is due to the fact that on combinations of data, fleets not answering both parts were eliminated from the tabulation. For example, in Figs. 3A and 3B, fleets not answering both the question on personnel and the question on the number of units in the fleet, could not be counted in the tabulation. For this reason, averages are presented in nearly all cases, so comparisons can be made on the various points discussed. This "weighting" produces a more accurate picture.

FLEET OPERATORS have always been puzzled by the question of whether they have been employing too few or too many men in their shops for efficient maintenance of their trucks. No complete information of this nature was available to them previously, and their only recourse was either to see what the practice was in fleets operated by men they knew personally, or to go along as they had in the past—adjusting their personnel requirements to keep the trucks on the road. However, the problem goes deeper than just keeping the trucks on the road, for the proper relationship between the number of shop personnel and

Mechanics Make Up 50% of Personnel

classifications in reports received from 469 fleets

Fig. 2B

VOCATIONAL GROUPS (Fleets of 100 and Over Trucks & Truck Tractors)	Number of Fleets Reporting	AVERAGE NUMBER OF UNITS IN FLEET: Average Number of Total Units	Average Number of Trucks and Truck-Tractors	Average Number of Trailers	Average Number of Passenger Cars	AVERAGE NUMBER OF SHOP PERSONNEL CONSIDERED ADEQUATE FOR FLEET OPERATION (Fleets having 100—over Trucks and Truck-Tractors): ★ Total Personnel in Shop	Mechanics	Mechanic Helper	GI Apprentice	Machinist-Welder	Body and Fender Men	Tiremen	Greasemen	Washers	Porters	Painters	Partsmen	Bookkeepers	Other Shop Personnel
COMMON CARRIER GROUP—Local & Over-the-Road	40	335.2	184.2	139.0	12.0	34.1	15.6	2.7	1.8	0.5	2.3	1.2	2.1	1.7	1.1	1.0	1.5	1.1	1.6
FOOD DISTRIBUTION GROUP—Bakeries, Dairies, Meats, and other Food Products	38	377.0	300.7	22.3	54.0	26.4	14.4	3.1	0.3	0.2	0.7	0.8	1.4	2.7	0.4	0.8	0.6	0.4	0.6
GOVERNMENT GROUP—State & County, Municipal, Federal	78	536.2	354.0	39.2	143.0	68.8	34.8	10.6	1.2	2.2	1.2	2.2	2.6	2.3	1.5	1.5	3.0	4.1	1.7
CONSTRUCTION—Builders, Quarries, Gravel	1	405.0	312.0	18.0	75.0	50.0	24.0	.....	3.0	5.0	3.0	2.0	2.0	2.0	.....	3.0	2.0	4.0	.....
PETROLEUM GROUP—Private carriers	3	575.6	334.6	60.7	180.3	43.0	14.0	11.7	0.7	.....	4.3	1.3	2.0	2.0	0.3	2.0	2.0	1.7	1.0
PUBLIC UTILITY GROUP—Gas, Power & Water	18	416.1	205.7	29.8	180.6	34.9	17.2	4.2	0.8	0.4	0.7	1.4	2.0	3.3	0.6	1.1	0.9	1.4	0.8
RETAIL DELIVERY GROUP—Other than food. Dry Cleaning, Laundry, Newspaper, Coal & Ice, Department stores, Beverage	9	180.2	158.2	6.8	15.2	13.8	6.6	1.6	.....	.....	0.2	0.8	0.6	0.9	0.2	0.6	0.8	0.5	1.0
TRUCK RENTAL	8	470.7	330.3	9.3	131.3	40.1	13.9	2.9	2.9	0.6	1.3	3.3	2.3	2.9	1.7	0.4	0.9	3.6	3.6
TRUCK & BUS FLEETS—Mixed	4	958.8	751.3*	41.8	165.7	197.8	85.8	12.5	11.8	1.8	8.8	3.0	6.0	30.8	6.3	4.3	4.8	7.8	14.3
OVERALL AVERAGES	199	445.2	294.2	52.0	99.0	49.2	24.0	6.3	1.4	1.1	1.4	1.7	2.2	2.9	1.1	1.2	1.9	2.4	1.6

*Includes Buses

builders, blacksmiths, wheel and bearing men, etc. The average number of men that these fleets believe necssary for efficient operation is given in column marked with a star. ¶ The figures are based on the replies given by 469 fleets regarding the personnel they now employ and those they believe should be added to their shop but do not include superintendents or foremen. See text for further discussion.

trucks operated will in turn give more economical and efficient maintenance and greater cooperation of the men in the shop.

Because this relationship of shop personnel to trucks operated is basic for efficient fleet operation, the Board of Experts desired to handle this question first in The Fleet Experience Handbook series. The material in this special section is based on the answers to questionnaires returned by over 500 fleets from all sections of the country and from all vocations. The members of the Board of Experts are all top-ranking supervisors of well-managed truck fleets, and the answers they have given are based on actual experience and data from their fleet records.

In order to make the information valuable for comparison by each fleet supervisor, it was decided first to separate the fleets into two size groups: Those having 50 to 99 trucks and truck-tractors, and those having 100 and over trucks and truck-tractors. The two size groups then were divided into vocational groups because of the different operational problems encountered.

On all questions, as complete a breakdown as possible was made in order to give each fleet operator a means of applying the findings to the problems encountered in his own fleet. For this reason, returns were first separated into vocational groups. Then some of these were subdivided according to whether they operated over-the-road or locally. In many cases fleets had both types of operation and were, therefore, grouped accordingly. These separations should be kept in mind when making any vocational comparisons.

On certain aspects of the personnel problem, vocations having related services were combined to form nine general groups, as in Figs. 2A, 2B, and 4. The vocations forming each group are listed to assist in making a comparative analysis.

Most of the variables influencing personnel in the shops of the Board of Exports are covered by the figures. However, the effect of local competitive situations or other local conditions could not possibly be taken into account by any means other than a complete study of individual fleets. An example of this was an attempt to establish some pattern for the hours the shops were open, and the shifts worked by shop personnel, but local conditions had too great an effect for any kind of a consolidated pattern.

By comparing the various breakdowns a good overall picture of the general practice of handling fleet shop personnel is obtained. However, it must be kept in mind that, although

(TURN TO NEXT PAGE, PLEASE)





How Operators Handle Fleet Shop Supervision . . .

The two tables at right, Fig. 3A and Fig. 3B, give interesting comparisons of how fleets use shop foremen. Only 6.6% of all fleets employ no foremen

56.1% of smaller fleets prefer working shop foremen. 32.1% are engaged in supervision only, 5.2% combine both functions; 6.6% shops have no foremen.

44.3% of larger fleets prefer supervising foremen. 37.3% employ working foremen only, 11.8% combine both functions; 6.6% shops employ no foremen.

this is one of the most extensive presentations on shop personnel, it is still limited in scope because of the impracticability of obtaining answers to these questions from all fleets. The fleets that are represented in this section are well-managed, with years of experience behind them, and do, therefore, show what the experienced men feel should be the general practice in the various vocations.

It is not the intent of this article to develop a formula to correct the troubles of any fleet, but only to give the procedures followed by the Board of Experts in their own fleets. After judicious study, the established practices can be extremely helpful to all fleet operators.

How Fleet Shops are Staffed

TO ASCERTAIN how many men fleets consider necessary to satisfactory shop operation, the Board of Experts was asked two questions: 1, How many men do you have for each of the following duties?, and 2, How many additional men do you believe are necessary for the efficient operation of your shop?

The answers to these two questions were combined to obtain an idea as to the most desirable grouping of personnel in a shop and the ideal number of men required to run the shop for each of the vocations. The averages for each of nine vocational groups are shown in Fig. 2A for fleets having 50 to 99 trucks and truck-tractors, and in Fig. 2B for those fleets having 100 or over trucks and truck-tractors. The average number of operating units for these vocations is also given to help in making a comparative analysis.

Half of Staffs are Mechanics

A BETTER understanding of Figs. 2A and 2B is gained from examining Fig. 1. This breakdown of fleet vocations is finer than that of the other two tables, and shows the relationship of power units to shop personnel. The power units comprise trucks, truck-tractors and passenger cars only; no miscellaneous vehicles have been counted here or in any of the other breakdowns. Supervisory men are not here included as shop help or mechanics, but are dealt with in separate tabulation.

In studying the illustration above Fig. 1, it will be seen that the average for 469 fleets is one mechanic and helper to every 10.8 power units, and 6.4 power units to each individual in the shop exclusive of shop supervisory personnel. When this is broken down to size of fleet, the average for fleets with 50 to 99 trucks and truck-tractors becomes one mechanic and helper to every 7.1 power units compared to one mechanic and helper to every 12.5 power units for fleets of 100 and over. For total shop personnel, the averages become 4.1 and 7.7 power units per man in the shop for the same respective sizes of fleets.

When this average relationship between the number of power units op-

Fig. 3A

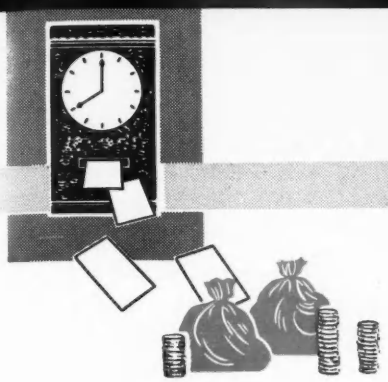
VOCATION (Fleets 50 to 99 Trucks & Truck Tractors)	Number of Fleets Reporting	Supervises only (Per cent)	Working Foreman (Per cent)	No Foreman Employed* (Per cent)	Foreman Supervises & Works (Per cent)
BAKERIES					
Retail and Wholesale	23	17.4	60.9	13.0	8.7
BEVERAGE DISTRIBUTORS	10	40.0	50.0	10.0	....
COAL, COKE & ICE	3	33.3	....	....	66.7
COMMON CARRIERS—					
Over-the-Road	19	42.1	52.6	....	5.3
COMMON CARRIERS—					
Local	11	27.3	45.4	27.3	....
COMMON CARRIERS—					
Local & Over-the-Road	16	6.2	68.8	12.5	12.5
CONSTRUCTION—					
Builders, Quarries, Gravel	11	45.5	54.5	....	....
DAIRIES—					
Retail & Ice Cream	18	11.1	77.8	11.1	....
DEPARTMENT STORES	4	25.0	75.0	....	....
FOOD DISTRIBUTORS—					
Over-the-Road	7	28.6	71.4	....	....
FOOD DISTRIBUTORS—					
Local	3	33.3	33.3	....	33.3
FOOD DISTRIBUTORS—					
Local & Over-the-Road	6	50.0	50.0	....	....
GOVERNMENT—					
State & County	43	41.9	51.2	4.7	2.3
GOVERNMENT—Federal	14	21.4	50.0	7.2	21.4
GOVERNMENT—Municipal	17	52.9	35.3	5.9	5.9
LAUNDRY & DRY					
CLEANING	4	....	100.0	....	....
NEWSPAPERS	2	....	100.0	....	....
PETROLEUM					
DISTRIBUTION	9	33.3	66.7	....	....
PETROLEUM PRODUCTION	3	....	66.7	....	33.3
PUBLIC UTILITIES—					
Gas, Water, Power	24	33.3	62.5	4.2	....
PUBLIC UTILITIES—					
Telephone	2	50.0	50.0	....	....
TRUCK RENTAL	5	20.0	60.0	20.0	....
TRUCK & BUS FLEETS—					
Mixed	17	52.9	41.2	5.9	....
TOTAL & AVERAGE	271	32.1	56.1	6.6	5.2

*In these cases, shop supervision is handled by shop superintendents.

Fig. 3B

VOCATION (Fleets 100 and Over Trucks & Truck Tractors)	Number of Fleets Reporting	Supervises only (Per cent)	Working Foreman (Per cent)	No Foreman Employed* (Per cent)	Foreman Supervises & Works (Per cent)
BAKERIES					
Retail & Wholesale	14	35.7	21.4	28.6	14.3
BEVERAGE DISTRIBUTORS	2	50.0	50.0	....	....
COAL, COKE & ICE	2	50.0	50.0	....	....
COMMON CARRIERS—					
Over-the-Road	16	50.0	37.5	6.2	6.3
COMMON CARRIERS—					
Local	8	50.0	12.5	12.5	25.0
COMMON CARRIERS—					
Local & Over-the-Road	10	50.0	40.0	....	10.0
CONSTRUCTION—					
Builders, Quarries, Gravel	1	....	....	....	....
DAIRIES—					
Retail & Ice Cream	21	19.1	61.9	9.5	9.5
DEPARTMENT STORES	....	....	....	....	....
FOOD DISTRIBUTORS—					
Over-the-Road	1	100.0	....	....	....
FOOD DISTRIBUTORS—					
Local	2	....	100.0	....	....
FOOD DISTRIBUTORS—					
Local & Over-the-Road	4	25.0	50.0	....	25.0
GOVERNMENT—					
State & County	29	58.6	27.6	....	13.8
GOVERNMENT—Federal	20	45.0	45.0	....	10.0
GOVERNMENT—Municipal	30	46.7	23.3	16.7	13.3
LAUNDRY & DRY					
CLEANING	3	33.3	33.3	33.3	....
NEWSPAPERS	2	....	100.0	....	....
PETROLEUM					
DISTRIBUTION	7	57.1	14.3	....	28.6
PETROLEUM					
PRODUCTION	1	....	100.0	....	....
PUBLIC UTILITIES—					
Gas, Water, Power	18	44.4	44.4	....	11.1
PUBLIC UTILITIES—					
Telephone	9	77.8	22.2	....	....
TRUCK RENTAL	8	....	87.5	....	12.5
TRUCK & BUS FLEETS—					
Mixed	4	100.0	....	....	....
TOTAL & AVERAGE	212	44.3	37.3	6.6	11.8

*In these cases, shop supervision is handled by shop superintendents.



Average Hourly Wages Paid Fleet Mechanics and Helpers

Breakdown, divided into four national regions, shows rates as between union closed shops and union & non-union open shops

Fig. 4

VOCATIONAL GROUPS (All Fleets 50 and Over Truck & Truck Tractors)	REGION I — Connecticut, Delaware, Dis.of Columbia, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Wisconsin.								REGION II — Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia.								REGION III — Arizona, Arkansas, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Wyoming.								REGION IV — California, Oregon, Washington							
	Union Closed Shops				Union and Non-Union Shops				Union Closed Shops				Union and Non-Union Shops				Union Closed Shops				Union and Non-Union Shops				Union Closed Shops				Union and Non-Union Shops			
	Mechanic		Mechanic Helper		Mechanic		Mechanic Helper		Mechanic		Mechanic Helper		Mechanic		Mechanic Helper		Mechanic		Mechanic Helper		Mechanic		Mechanic Helper		Mechanic		Mechanic Helper		Mechanic		Mechanic Helper	
	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid	Fleets Reporting	Average Wage Paid
COMMON CARRIER GROUP Local and Over-the-Road	34	1.20	24	0.98	21	1.15	16	0.92	4	1.15	2	0.98	6	1.06	4	0.91	5	1.119	5	0.92	3	1.02	2	0.73	5	1.52	1	1.27	2	1.30	1	1.11
FOOD DISTRIBUTION GROUP Bakeries, Dairies, Meats and other Food Products	56	1.23	40	1.03	17	1.10	14	0.86	...	...	...	...	6	1.15	4	0.86	1	0.90	...	...	6	1.05	3	0.92	7	1.47	3	1.22	...	...	...	...
GOVERNMENT GROUP— State, County, Municipal, Federal	8	1.37	8	1.18	62	1.21	53	0.98	...	...	...	...	18	1.07	15	0.75	2	1.43	2	1.17	17	1.06	15	0.87	1	1.50	...	...	19	1.30	16	1.17
CONSTRUCTION— Builders, Quarries, Gravel	5	1.28	4	1.07	6	1.14	5	0.96	...	...	...	...	1	1.10	1	0.80	...	...	...	...	1	1.00	1	0.94	3	1.15	...	...	1	1.55	1	1.24
PETROLEUM GROUP— Private carriers	1	1.45	1	1.25	7	1.26	4	1.02	...	...	...	...	5	1.20	4	0.87	...	...	...	...	2	1.52	1	1.26	...	...	...	...	1	1.35	1	1.05
PUBLIC UTILITY GROUP— Gas, Power and Water	10	1.27	6	1.05	9	1.24	6	1.04	1	1.16	1	0.85	2	1.24	2	0.98	...	...	...	...	2	1.48	1	1.10	3	1.82	2	1.18	4	1.53	4	1.19
RETAIL DELIVERY GROUP— Other than food. Dry Cleaning, Laundry, Newspaper, Coal and Ice, Department Stores, Beverage	16	1.33	11	1.04	6	1.38	4	0.95	1	1.00	...	...	2	1.09	...	...	...	...	...	...	...	...	...	...	3	1.53	...	...	...	...	1	1.30
TRUCK RENTAL	4	1.30	3	1.03	4	1.18	3	0.99	...	...	...	...	3	1.02	1	0.50	...	...	...	...	1	1.00	1	0.85	1	1.75	1	1.10	...	...	...	...
TRUCK AND BUS FLEETS, Mixed	7	1.06	5	1.10	5	1.16	4	1.06	...	...	...	...	1	1.27	1	0.85	1	1.20	...	...	2	1.22	2	0.99	2	1.43	1	1.21	...	...	...	...

Fig. 4. This table gives some idea of the prevailing hourly wage scales for mechanics and mechanic helpers in various sections of the country. It is not presented as a criterion for hourly wages of mechanics or helpers, but only as a picture reflected by the fleets participating in the Fleet Experience Handbook survey. The states included in each of these regions are listed under the region number at the top of the table. The fleets answering the question of wages have been divided into nine vocational groups composed of fleets having similar operation. The shops of these fleets have been divided into those with closed shop contracts with the unions, and those employing both union and non-union labor, or non-union labor exclusively. The figure preceding each hourly wage is the number of fleets upon which the average is based. In many cases the number of fleets reporting is small because of the fine breakdown, but the wage stated has been tabulated, nevertheless, to provide some indication of the prevailing shop wage rate

erated and the number of men desired in the shop is spread out into a vocational picture, a trend toward a general pattern can be seen. However, a number of vocations such as the beverage distributors, food distributors, truck rentals and laundries appear to be rather far out of the general pattern. This is more than likely due to the limited response in these particular vocations, and additional response from these fleets might bring the averages into closer relationship with the other vocations.

It is interesting to note from Figs. 2A and 2B that in all fleets, other than truck rental and mixed truck and bus fleets, mechanics make up about half of the shop personnel. In the latter group (mixed truck and bus fleets), far more washers, body and fender men, greasemen, painters and porters are employed than in any of the other vocations. Also, in this particular group, more men were placed in specific shop jobs, while the practice in other fleets seems to be to form combinations of the duties

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Principal Types of Vehicles in Fleet Service . . .

Smaller fleets average 53.03% trucks, 7.81% truck-tractors, 13.87% trailers, and 13.40% passenger cars

Fig. 6A

VOCATION (Fleets of 50 to 99 Trucks & Truck Tractors)	Number Fleets Reporting	Total Vehicle Units Operated	AVERAGES PER FLEET								
			Total Units	TRUCKS		TRUCK-TRACTORS		TRAILERS		PASSENGER CARS	
				No. per Fleet	% of Total Units	No. per Fleet	% of Total Units	No. per Fleet	% of Total Units	No. per Fleet	% of Total Units
BAKERIES—Retail & Wholesale	23	1616	70.3	64.4	91.70	1.6	2.23	1.5	2.10	2.8	3.97
BEVERAGE DISTRIBUTORS	10	787	78.7	50.1	63.66	7.6	9.66	11.5	14.61	9.5	12.07
COAL, COKE & ICE	3	214	71.3	55.7	78.04	.....	.....	.....	.....	15.7	21.96
COMMON CARRIER—Over-the-Road	19	2367	125.0	20.7	16.60	38.3	30.76	60.8	48.80	4.8	3.84
COMMON CARRIER—Local	10	754	75.4	56.9	75.46	5.9	7.83	9.2	12.20	3.4	4.51
COMMON CARRIER—Local & Over-the-Road	15	2226	148.4	38.9	26.23	34.6	23.32	70.6	47.57	4.3	2.88
CONSTRUCTION—Quarries, Gravel, Builders	12	1052	87.7	63.6	72.53	5.6	6.37	5.8	6.65	12.7	14.45
DAIRIES—Retail Delivery & Ice Cream	17	1312	77.2	60.9	78.96	2.6	3.35	9.1	11.82	4.5	5.87
DEPARTMENT STORES	4	365	91.3	84.3	92.33	0.5	0.55	0.5	0.55	6.0	6.57
FOOD DISTRIBUTORS—Over-the-Road	7	845	120.7	47.0	38.93	23.7	19.65	34.6	28.64	15.4	12.78
FOOD DISTRIBUTORS—Local	3	369	123.0	87.0	70.73	0.7	0.54	0.7	0.54	34.7	28.19
FOOD DISTRIBUTORS—Local & Over-the-Road	6	684	114.0	44.7	39.18	23.3	20.47	13.7	11.99	32.3	28.36
GOVERNMENT—State & County	44	3164	71.9	56.6	78.77	25.9	3.60	2.5	3.41	10.2	14.22
GOVERNMENT—Federal	14	1292	72.3	65.4	70.90	4.8	5.18	10.8	11.69	11.3	12.23
GOVERNMENT—Municipal	17	1605	94.4	65.2	69.03	2.5	2.68	5.4	5.67	21.4	22.62
LAUNDRY & DRY CLEANING	4	228	57.0	53.8	94.30	1.3	2.20	1.0	1.75	1.0	1.75
NEWSPAPER DELIVERY	2	150	75.0	70.0	93.33	.....	.....	.....	.....	5.0	6.67
PETROLEUM DISTRIBUTION	9	796	88.4	44.1	49.88	9.1	10.30	9.1	10.30	26.1	29.52
PETROLEUM PRODUCTION	3	550	183.3	101.0	55.10	.....	.....	33.0	18.00	49.3	26.90
PUBLIC UTILITIES—Gas, Water, Power	25	3090	123.6	68.2	55.21	0.3	0.23	10.5	8.48	44.6	36.08
PUBLIC UTILITIES—Telephone	5	555	111.0	76.0	68.47	.....	.....	12.4	11.53	22.2	20.00
TRUCK RENTAL	5	389	77.8	68.2	87.66	0.8	1.03	1.0	1.29	7.8	10.02
TRUCK & BUS FLEETS—Mixed	18	3970*	220.5	20.1	9.12	3.1	1.39	3.4	1.54	6.5	2.95
TOTALS & AVERAGES	275	28,380†	103.2	54.7	53.03	8.0	7.81	14.3	13.87	13.8	13.40

† Includes 3,375 Buses (11.89%)
* Includes 3.375 Buses (85%)

Figs. 6A, above, and 6B, at right, show, first, the truck is the basic fleet vehicle. Next, the number of trailers per fleet is approximately twice the number of tractors. Finally, approximately one of every five fleet vehicles is a passenger car. For bus data, see footnotes at bottom of both tables

Most Fleet Mechanics Furnish Own Hand Tools

Only 19% of all reporting fleets furnish men with basic hand tools. Four groups indicate no tool contributions to their men.

Fig. 5

VOCATION (All Fleets 50 and Over Trucks & Truck Tractors	Fleets Reporting	Per Cent YES	Per Cent NO
BAKERIES—Retail & Wholesale	37	89.2	10.8
BEVERAGE DISTRIBUTORS	13	69.2	30.8
COAL, COKE & ICE	5	80.0	20.0
COMMON CARRIERS—Over-the-Road	34	91.2	8.8
COMMON CARRIERS—Local	19	89.5	10.5
COMMON CARRIERS—Local & Over-the-Road	28	100.0	.....
CONSTRUCTION—Builders, Quarries, Gravel	13	92.3	7.7
DAIRIES—Retail & Ice Cream	40	90.0	10.0
DEPARTMENT STORES	4	50.0	50.0
FOOD DISTRIBUTORS—Over-the-Road	8	75.0	25.0
FOOD DISTRIBUTORS—Local	5	100.0	.....
FOOD DISTRIBUTORS—Local & Over-the-Road	9	88.9	11.1
GOVERNMENT—State & County	67	64.2	35.8
GOVERNMENT—Federal	33	51.5	48.5
GOVERNMENT—Municipal	46	78.3	21.7
LAUNDRY & DRY CLEANING	7	85.7	14.3
NEWSPAPERS	4	100.0	.....
PETROLEUM DISTRIBUTION	15	93.3	6.7
PETROLEUM PRODUCTION	4	100.0	.....
PUBLIC UTILITIES—Gas, Water, Power	43	76.7	23.3
PUBLIC UTILITIES—Telephone	.....	.....	.....
TRUCK RENTAL	14	85.7	14.3
TRUCK & BUS FLEETS—Mixed	21	95.2	4.8
TOTAL & AVERAGE	469	81.0	19.0



of tiremen, greasemen, washers or porter for one or more men. In making up the table, combination jobs were equally divided. That is, if a fleet had two men to handle the four duties previously mentioned, each job was tabulated as having 0.5 men for that fleet.

An interesting sidelight on this question was the comment of a number of fleets regarding the employment of GI apprentices. As can be seen in Figs. 2A and 2B, there are relatively few GI apprentices in fleet shops. The reasons are tersely summed up by the oft-recurring remark, "too much red tape."

How Fleet Foremen Function

FIGS. 3A and 3B show a vocational breakdown of fleet foremen's functions. The data are shown as a percentage of the answering fleets. There were very few fleets without foreman supervision in the shop. A high percentage of all types of fleets employed working foremen only, and many used them for supervision only. A number of fleets checked them as being both supervising foremen and working foremen. The percentage of these appear in the last column of the table. A comparison of the percentages for the two sizes of fleets will show that smaller fleets generally prefer working foremen.

Predominant Wage Scales

THE predominant wage scales in other fleet shops are always of interest to those responsible for efficient fleet operation. Fig. 4 shows

. . Trucks Make Up More Than Half of All Types

The large fleets average 59.35% trucks, 5.58% truck-tractors, 11.48% trailers, and 21.86% passenger cars

Fig. 6B

VOCATION (Fleets of 100 and Over Trucks and Truck Tractors)	Number Fleets Reporting	Total Vehicle Units Operated	AVERAGES PER FLEET: Total Units	TRUCKS: No. per Fleet	TRUCKS: % of Total Units	TRUCK-TRACTORS: No. per Fleet	TRUCK-TRACTORS: % of Total Units	TRAILERS: No. per Fleet	TRAILERS: % of Total Units	PASSENGER CARS: No. per Fleet	PASSENGER CARS: % of Total Units
BAKERIES—Retail & Wholesale	14	2895	206.8	192.4	93.02	3.7	1.80	4.0	1.93	6.7	3.25
BEVERAGE DISTRIBUTORS	3	827	275.7	216.7	78.60	11.7	4.23	22.7	8.22	24.7	8.95
COAL, COKE & ICE	2	260	130.0	119.0	91.54	....	.....	....	.....	11.0	8.46
COMMON CARRIERS—Over-the-Road	16	5089	318.0	83.3	26.19	90.8	28.55	135.5	42.63	8.3	2.63
COMMON CARRIERS—Local	10	3399	339.9	120.3	35.40	48.0	14.12	164.4	48.36	7.2	2.12
COMMON CARRIERS—Local & Over-the-Road	12	4251	354.2	107.3	30.30	103.6	29.24	122.5	34.58	20.8	5.88
CONSTRUCTION—Builders, Quarries, Gravel	1	405	405.0	300.0	74.08	12.0	2.96	18.0	4.44	75.0	18.52
DAIRIES—Retail & Ice Cream	22	8082	367.4	293.0	79.77	15.6	4.25	30.5	8.29	28.2	7.69
DEPARTMENT STORES	..	....	.....	.....	.....	....	.....	....	.....	.....	.....
FOOD DISTRIBUTORS—Over-the-Road	1	251	251.0	197.1	78.48	22.0	8.76	22.0	8.76	10.0	4.00
FOOD DISTRIBUTORS—Local	2	249	124.5	112.0	89.97	2.0	1.60	2.0	1.60	8.5	6.83
FOOD DISTRIBUTORS—Local & Over-the-Road	4	4732	1183.0	700.0	59.17	36.3	3.06	51.8	4.38	395.0	33.39
GOVERNMENT—State and County	30	15,856	528.5	377.9	71.50	7.4	1.40	16.4	3.10	126.8	24.00
GOVERNMENT—Federal	21	12,599	600.0	402.7	67.12	29.2	4.87	75.6	12.60	92.5	15.41
GOVERNMENT—Municipal	29	14,429	497.5	244.5	49.14	20.5	4.12	36.4	7.31	196.2	39.43
LAUNDRY & DRY CLEANING	3	391	130.3	119.7	91.82	....	.....	....	.....	10.7	8.18
NEWSPAPER DELIVERY	2	324	162.0	150.0	92.59	....	.....	....	.....	12.0	7.41
PETROLEUM DISTRIBUTION	7	4348	621.0	328.1	52.83	35.6	5.73	63.3	10.18	194.1	31.26
PETROLEUM PRODUCTION	1	257	257.0	131.0	50.97	..	.....	43.0	16.73	83.0	32.30
PUBLIC UTILITIES—Gas, Water, Power	18	7491	416.0	203.2	48.83	2.5	0.60	29.8	7.17	180.6	43.40
PUBLIC UTILITIES—Telephone	10	5932	593.2	428.0	72.15	....	.....	71.1	11.99	94.1	15.86
TRUCK RENTAL	8	3766	470.7	327.3	69.52	3.0	0.64	9.3	1.96	131.3	27.88
TRUCK & BUS FLEETS—Mixed	4	3835*	958.7	313.5	32.30	7.3	0.76	41.8	4.35	165.8	17.29
TOTALS & AVERAGES	220	99,668†	453.0	268.9	59.35	25.3	5.58	52.0	11.48	99.0	21.86
TOTAL & AVERAGES, Figs. 6A & 6B	495	128,048‡	58.7	150.0	57.95	15.7	6.08	31.0	12.00	51.7	19.99

‡ Includes 5097 Buses (3.98%)
† Includes 1722 Buses (1.73%)
* Includes 1722 Buses (44.90%)



the average wages paid mechanics and mechanic helpers in nine vocational groups in union closed shops and shops employing union and non-union help or non-union help exclusively. (In "Government" fleets, of course, the majority of the workers are under the Civil Service Commission.) In order to make the wage picture more representative nationally, fleets were divided into four regions. The states included in each region are listed.

Because of the complete wage breakdown, many of the wage scales shown are based on too few answers to form a true average for the type of fleet in a particular locality. This point was well understood in making the tabulation, but it was thought that the wages would be of some interest to fleet operators, since they would still be an indication of the existing situation. The table is merely a means of showing how the wage scale varies in the Board of Experts' shops, between one vocation and another, one type of shop and another, and one region and another.

It appears generally true that mechanics and helpers in the closed union shops are receiving wages slightly above those of other shops. It is also interesting to note that the trend in the West seems to be toward wages higher than those paid in the East.

Mechanics Use Own Hand Tools

ANOTHER interesting point brought out in the returns from the more than 500 fleets, was that in the vast majority of fleets the mechanics furnish their own hand tools for shop work. Fig. 5 establishes this fact in the answering fleets. The only exceptions seem to be the Federal Government, where most workers are under Civil Service, and the Department Store fleets, where the answers have probably been too few to give a true average picture of existing conditions.

Shop Working Hours and Shifts

ANOTHER factor entering into the personnel picture is the length of time the shop remains open and the type of shifts worked by mechanics and other shop personnel. One of the questions asked was the hours shops were open and the shifts, if any, worked. It was hoped by analyzing the answers to these two questions that some sort of a pattern would be established. However, upon analysis, it was found that the number of shifts seemed to be determined almost exclusively by local conditions and, as a result, there was no particular pattern formed by fleets of the same size, nor fleets of the same vocations. For this reason, it was impossible to chart the information.

(TURN TO NEXT PAGE, PLEASE)

Most Fleets Operate Shops on Six-Day Week

Over-the-road carriers, dairy, newspaper, truck rental, and truck and bus fleets find seven-day week needed. Other fleets seem to prefer a five-day to a five-and-one-half-day week

Fig. 7

VOCATION (All Fleets 50 and Over Trucks and Truck Tractors)	Number of Fleets Reporting	Monday-Friday (5 days) Per cent	Monday—½ Saturday (5½ days) Per cent	Monday-Saturday (6 days) Per cent	Monday-Sunday (7 days) Per cent
BAKERIES— Retail & Wholesale	37	2.7	....	89.2	8.1
BEVERAGE DISTRIBUTORS	12	8.3	....	83.4	8.3
COAL, COKE & ICE	5	20.0	....	80.0	....
COMMON CARRIERS— Over-the-Road	34	2.9	5.9	35.3	55.9
COMMON CARRIERS—Local	17	5.9	....	58.8	35.3
COMMON CARRIERS— Local & Over-the-Road	25	....	8.0	44.0	48.0
CONSTRUCTION— Builders, Quarries, Gravel	13	7.7	7.7	69.2	15.4
DAIRIES— Retail & Ice Cream	40	....	7.5	22.5	70.0
DEPARTMENT STORES	4	....	....	100.0	....
FOOD DISTRIBUTORS— Over-the-Road	8	12.5	25.0	37.5	25.0
FOOD DISTRIBUTORS— Local	5	....	....	60.0	20.0
FOOD DISTRIBUTORS— Local & Over-the-Road	10	20.0	....	60.0	20.0
GOVERNMENT— State & County	70	34.3	14.3	48.6	2.8
GOVERNMENT—Federal	33	63.6	9.1	12.1	15.2
GOVERNMENT—Municipal	46	23.9	10.9	50.0	15.2
LAUNDRY & DRY CLEANING	7	28.6	....	71.4	....
NEWSPAPERS	4	....	....	50.0	50.0
PETROLEUM DISTRIBUTION	15	13.3	6.7	60.0	20.0
PETROLEUM PRODUCTION	4	25.0	....	75.0	....
PUBLIC UTILITIES— Gas, Water, Power	43	18.6	4.7	46.5	30.2
PUBLIC UTILITIES— Telephone	....	....	....	....	....
TRUCK RENTAL	15	....	....	33.3	66.7
TRUCK & BUS FLEETS— Mixed	19	5.3	5.3	5.3	84.1

Of the 23 vocations listed, only nine spread their work-day week from five to seven days. Only the Federal fleets run a high tally for the five-day week

The analysis did show that a surprising number of fleet shops operate on a 24-hour basis. Of those on only daytime operation, the majority seemed to open any time from 5 to 8 o'clock in the morning and close between 4.30 and 6 o'clock at night.

There were all types of straight shifts and split shifts given. Some staggered the working periods of mechanics and helpers only, and had the general shop help working for just a certain period of the day, while others staggered the working periods of all shop personnel. Many of the fleets operated the shop only during the day for vehicle maintenance, and utilized the night hours for washing and greasing. The only comment that can be made here is that there is no uniformity in the working periods of shop employees.

It was possible to obtain more definite information on the days of the week that the shops were in operation, and the results are given in Fig. 7 as the percentage of those answering. The majority of the fleets seem to operate on the six-day week of Monday to Saturday, with a few employing the five and one-half day week. Over-the-road common carrier, dairy, newspaper, truck rental, and truck and bus fleets appear to find the seven-day week most applicable to their types of operation.

Only a few fleets were found to be working a five-day week in the shop, and only Federal Government fleets seemed to have a preference for it.

Although the shops of most fleets worked no longer than Saturday, there were fleets that found it necessary to keep the shop open for special service work on Sunday. Such occasional Sunday service seems to be practiced only by food distributors, Federal and municipal fleets, petroleum distributors, public utilities (other than telephone), and the mixed fleets of trucks and buses.

Mechanic Training Programs

TO DETERMINE what fleets were doing to improve the quantity and calibre of mechanic personnel, members of the Board of Experts were asked if they were participating in any outside mechanic training program and, if so, what sort.

The returns, shown graphically on this page, bring out the fact that fleets are doing little or nothing to develop mechanics. Among those that were doing something, the majority made use only of the short courses given by truck manufacturers or, in one or two cases, the local trade schools. Undoubtedly, mechanic training is an unplumbed practice in the fleet field.

Few Fleets Employ Training Programs

Survey indicates that mechanic training is unusual in fleet shops



87.3% DON'T

12.7 % DO

The majority of the 12.7% use only short courses given by truck manufacturers or local trade schools

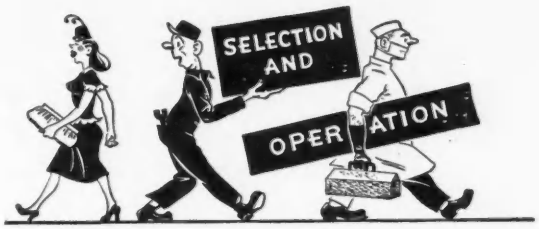
Vehicle and Mileage Data

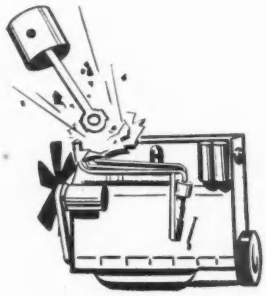
THE total number and basic types of vehicles operated by responding fleets is given in Figs. 6A and 6B. Totals are broken down vocationally and by types of vehicles.

A determining factor in setting up a shop to handle any particular fleet, is the mileage the units of the fleet operate. The average mileage traveled per fleet truck or truck-tractor for all fleets is 15,561 miles per year.

These data serve to bring out very clearly a point about truck operations that is prone to be overlooked, or at least to be under-estimated. The combined average yearly mileage covered by 69,930 trucks and truck-tractors *only* for the 418 fleets giving mileage figures, amounted to the staggering total of *1,088,146,882 miles per year!*

Transportation Engineering Formulas





PISTON DISPLACEMENT

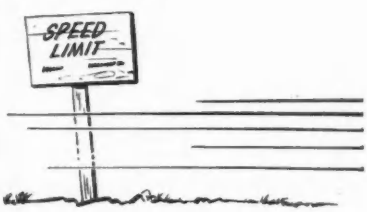
Piston Displacement in cu. in. = B × B × .7854 × S × No. of Cylinders

B = Bore
S = Stroke
.7854 = Constant comprising the conversion of the area of a square to the area of a circle of the same dimensions

TORQUE AT PEAK HORSEPOWER

$$\text{Torque at Peak HP} = \frac{\text{HP} \times 5252}{\text{RPM}}$$

5252 = Constant resulting from the conversion of torque and RPM into horsepower
HP = Maximum net horsepower (See Horsepower below)
Peak HP = Maximum useful horsepower



VEHICLE SPEED

$$\text{MPH} = \frac{\text{RPM} \times \text{R}}{168 \times \text{FGR}}$$

MPH = Miles Per Hour
RPM = Engine Revolutions Per Minute
R = Rolling Radius
FGR = Final Gear Ratio
168 = A constant comprising the conversion of rolling radius in inches to wheel circumference in feet; wheel revolutions per minute to wheel revolutions per hour; feet per hour to miles per hour

AMA HORSEPOWER

(For License Purposes Only)

$$\text{AMA HP} = \frac{\text{B} \times \text{B} \times \text{No. of Cyl.}}{2.5}$$

B = Cylinder Bore
2.5 = Constant based on average engine in 1908

FINAL GEAR RATIO

$$\text{FGR} = \frac{\text{R} \times \text{GVW} \times (\text{GA} + .012)}{\text{lb. in. Torque} \times .90}$$

GA = Grade Ability
GVW = Gross Vehicle Weight
lb. in. Torque = 12 × lb. ft. Torque
R = Rolling Radius in Inches
.90 = Efficiency for all rear axles except worm, then .85
.012 = Rolling resistance on hard-surfaced roads



GRADE ABILITY

$$\text{GA} = \frac{\text{TE}}{\text{GVW}} \text{ minus } .012$$

GA = Grade Ability
TE = Tractive Effort
GVW = Gross Vehicle Weight
.012 = 12 lb. per 1000 lb., rolling resistance on hard-surfaced roads

DRAWBAR PULL

$$\text{DP} = \frac{.90 \times \text{lb. in. Torque} \times \text{FGR}}{\text{R}} - .012\ \text{GVW}$$

DP = Drawbar Pull
R = Rolling Radius in Inches
FGR = Final Gear Ratio
GVW = Gross Vehicle Weight
.90 = Efficiency for all rear axles except worm, then .85
lb. in Torque = 12 times Torque in lb. ft.
.012 = 12 lb. per 1000 lb. Rolling Resistance



AIR RESISTANCE

Air Resistance = .0025 X (MPH)^2 X FA
FA = Frontal area of equipment in sq. ft.
MPH = Miles Per Hour



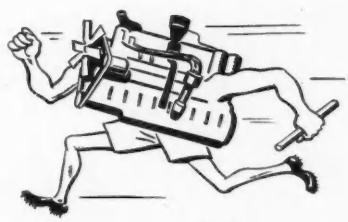
HORSEPOWER

Maximum Net Horsepower (maximum gross horsepower less power consumed by engine accessories) is the only horsepower that should be used in transportation engineering formulas, and can be determined only by using a dynamometer or may be procured from the manufacturer

MAXIMUM NET TORQUE

$$\text{Max. Net Torque} = \frac{\text{Torque at Peak HP} \times 5}{4}$$

(This is approximate and should be used only when actual net torque is not known.)
5 and 4 = Figures based on an analysis of a number of torque curves



TRACTIVE EFFORT

$$\text{TE} = \frac{\text{lb. in. Torque} \times \text{FGR} \times .90}{\text{R}}$$

R = Rolling Radius in Inches
FGR = Final Gear Ratio
lb. in. Torque = 12 times Torque in lb. ft.
.90 = Efficiency for all rear axles except worm then .85

MAXIMUM NET ENGINE TORQUE

Torque in lb. ft. = .70 × cu. in. Piston Displacement. (This is approximate and should be used only when actual torque is not known.)
.70 = Average figure based on analysis of number of torque curves.

ENGINE SPEED

$$\text{RPM} = \frac{\text{MPH} \times 168 \times \text{FGR}}{\text{R}}$$

(See vehicle speed left for abbreviation)

Italic figure, thus (30) denotes limit now effective by proclamation or order of the Governor or other State Official.

STATE SIZE AND

STATE	SIZE RESTRICTIONS (K)							GROSS WEIGHT (LEGAL LIMITS)		PRACTICAL GROSS WEIGHT LIMITS (K) (See NOTE) (In thousands of pounds) (Where No Distinction is Made Between Pneumatic and Solid Tire Limits, Below Limits Apply to Both)												
	Width (Inches)	Height (Feet)	LENGTH: Single Unit	LENGTH: Tractor Semi-Trailer	LENGTH: Other Combinations	Number of Trailers (Semi-Trailer = ½)	Minimum Tandem Axle Spacing	Per Inch of Tire Width	Per Axle (1000 lb.)	4-Wheel Single Unit	6-Wheel Single Unit	4-Wh. Tractor 2-Wh. Semi-T.	4-Wh. Tractor 4-Wh. Semi-T.	6-Wh. Tractor 4-Wh. Semi-T.	4-Wh. Truck 4-Wh. Trailer	4-Wh. Truck 6-Wh. Trailer	6-Wh. Truck 4-Wh. Trailer	6-Wh. Truck 6-Wh. Trailer	4-Wh. Tractor 2-Wh. Semi-T. 4-Wh. Trailer	4-Wh. Tractor 4-Wh. Semi-T. 4-Wh. Trailer	6-Wh. Tractor 4-Wh. Semi-T. 6-Wh. Trailer
TVX Ala.	96	12½	35	45	NP	½	NS	600	18 I	36	46.9	53.9	53.9	53.9	NP	NP	NP	NP	NP	NP	NP
Ariz.	102	13½	35	65	65	1½	NS	700	18	36	53.6	54	77.6	77.6	77.6	77.6	77.6	77.6	77.6	77.6	77.6
VX Ark.	96	12½	35	45	45	1 or ½	40	Table	18	36	46.9-IW	53.9-IW	53.9-IW	53.9-IW	53.9-IW	53.9-IW	53.9-IW	53.9-IW	NP	NP	NP
XZ Cal.	96	13½	35	60	60	NR	NS	NS-P 600-S	18	36	50	54	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6
X Colo.	96 102 b	12½	35	60	60	2	40	NS-P 600-S	18-I 16-J	30	46	54	69	69	69	69	69	69	69	69	69
TZ Conn.	96 c 102	12½	40	40	NP	½	NS	NS-P 600-S	NS(Z)	32-P 26-S	*45* 40	*45* 40	*45* 40	*45* 40	NP	NP	NP	NP	NP	NP	NP
Z Del.	96	12½	35	60	60	1½	NS	*40* 700	20-P 16-S	34	40	40	48	48	52-P 44-S	52-P 44-S	62-P 44-S	62-P 44-S	62-P 60-S	62-P 60-S	62-P 60-S
VZ D. C.	108 a 96	12½	35	50	50	NR	NS	NS	18	30	40	40	40	40	40	40	40	40	NP	NP	NP
Fla.	96	12½	35	50	50	1 or ½	NS	*600* 550	18Q	24	40	40	60	60	60	60	60	60	NP	NP	NP
X Ga.	96	13½	35	45	45	1 or ½	40	NS	18-I 16-J	36	46.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9
V³ Idaho	96	14	35	45	65	1½	NS	800 [o]	18	28	42	42	56	60	56	68	68	68	68	68	68
TV¹z Illinois	96	NS	42	45‖	45	1½	40	800	18	36	41	45	59	59	63	63	72	72	72	72	72
X Indiana	96	12	36	40	40	1½	40	800	18	36	*50* 47.6	*54* 50.4	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9
TX Iowa	96	*12½* 12	*35* 33	45	NP	½	40	NS	*18* 17	36	50.2	54	57.7	57.7	NP	NP	NP	NP	NP	NP	NP
X Kansas	96	12½	35	45	45	1 or ½	40	NS	18-I 16-J	24 28	34	53.9	53.9	53.9	48	58	58	63	NP	NP	NP
T Ky.	96	12½	35	45	NP	½	NS	600	18	30	42	42	42	42	NP	NP	NP	NP	NP	NP	NP
Z La.	96	12½	35	50	60	1 or ½	40	Table	18-I 16-J	18	36	38	50	64	54	NP	68	NP	NP	NP	NP
Maine	96	12½	*45* 40 h	*45* 40 h	*45* 40 h	1 or ½	NS	600	22-G	30	40	40	40	40	40	40	40	40	NP	NP	NP
X Md.	96	NR	55	55	55	NR	NS	600	22.4 18-e	44.8	58.4	54	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2
Mass.	96 102 b	NR	35	45	NS	T 1 or ½	NS	800	22.4	36	50	50	50	50	50	50	50	50	NP	NP	NP
P Mich.	96 102 b	12½	35	50	50	1½	NS	Table	18-P 16-S	36-PW 32-S	44-PW 39.2-S	54-PW 48-S	62-PW 55.2-S	70-PW 62.4-S	72-PW 64-S	80-PW 71.2-S	80-PW 71.2-S	88-PW 78.4-S	90-PW 80-S	98-PW 87.2-S	114-PW 101.6-S
TX Minn.	96	12½	40	45	45	1 or ½	NS	NR	18-P 10.6-S	36	46.9-E 32.4	54-E 32.4	57.7-E 34.6	57.7-E 34.6	57.7-E 34.6	57.7-E 34.6	57.7-E 34.6	57.7-E 34.6	NP	NP	NP
Miss.	96	12½	35	45	45	1 or ½	40	NS	18-I 16-J	36	45	45	45	45	45	45	45	45	NP	NP	NP
ZX Mo.	96	12½	35	45	45	NR	NS	600	18	36	46.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	NP	NP	NP
V¹Z Mont.	96	13½	35	60	60	1 or ½	NS	NS	18	36	54	54	73.6	73.6	73.6	73.6	73.6	73.6	NP	NP	NP
TX Neb.	96	*12½* 12	35	42	45	1½	NS	NS	*18* 16	32-W	*50.2* 32	*56.2* 40	*56.2* 40	*56.2* 40	*57.7* 48	*57.7* 48	*57.7* 48	*57.7* 48	*57.7* 48	*57.7* 48	*57.7* 48
Nev.	NR	NR	NR	NR	NR	NR	42	600	NR	25	38	38	38	38	50	63	63	76	63	63	76
N. H.	96	NR	35	45	45	NR	NS	800	18	30	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
N. J.	96	12½	35	45	50	1 or ½	NS	Table	Table	30	40	60	60	60	60	60	60	60	NP	NP	NP
V¹X N. M.	96 100 b	12½	35	65	65	1 or ½	40	700-P 500-S	18	36	50.2	54	69	69	69	69	69	69	NP	NP	NP
X N. Y.	96 108 b	13	35	50	50	1 or ½	48	800-P 640-S	22.4-P 17.9-S	36-P 28.8-S	44-P 35.2-S	54-P 49.2-S	61.5-P 49.2-S	61.5-P 49.2-S	61.5-P 49.2-S	61.5-P 49.2-S	61.5-P 49.2-S	61.5-P 49.2-S	NP	NP	NP
N. C.	96	12½	35	48‖	48‖	1 or ½	48	600	18-I 16-J	26 L	40	40	50	50	50	50	50	50	NP	NP	NP

WEIGHT LIMITS

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Corrected to April 1, 1947



STATE	SIZE RESTRICTIONS (K)							GROSS WEIGHT (LEGAL LIMITS)		(See NOTE) PRACTICAL GROSS WEIGHT LIMITS (K) (In thousands of pounds) (Where No Distinction is Made Between Pneumatic and Solid Tire Limits, Below Limits Apply to Both)											
	Width (Inches)	Height (Feet)	LENGTH: Single Unit	LENGTH: Tractor Semi-Trailer	LENGTH: Other Combinations	Number of Trailers (Semi-Trailer = ½)	Minimum Tandem Axle Spacing	Per Inch of Tire Width	Per Axle (1000 lb.)	4-Wheel Single Unit	6-Wheel Single Unit	4-Wh. Tractor 2-Wh. Semi-T.	4-Wh. Tractor 4-Wh. Semi-T.	6-Wh. Tractor 4-Wh. Semi-T.	4-Wh. Truck 4-Wh. Trailer	4-Wh. Truck 6-Wh. Trailer	6-Wh. Truck 4-Wh. Trailer	6-Wh. Truck 6-Wh. Trailer	4-Wh. Tractor 2-Wh. Semi-T. 4-Wh. Trailer	4-Wh. Tractor 4-Wh. Semi-T. 4-Wh. Trailer	6-Wh. Tractor 4-Wh. Semi-T. 6-Wh. Trailer
TX N. D.	96	12½	35	45	45	1 or ½	40	550	18 14-f	36	50.2	54	57.7	57.7	57.7	57.7	57.7	57.7	NP	NP	NP
X Ohio	96	12½	35	45	60	NR	NS	650	18-P 16-S	36-P 32-S	50.2-P 40.2-S	54-P 50.2-S	63.7-P 50.2-S	63.7-P 50.2-S	72-P 59.2-S	75-P 59.2-S	75-P 59.2-S	75-P 59.2-S	75-P 59.2-S	75-P 59.2-S	75-P 59.2-S
Okla.	96	12½	45	45	45	1½	NS	600	NS	24	24	47	47	47	47	47	47	47	47	47	47
VXZ Ore.	96	12½	35	50	60	NR	40	600 q	18 w 16 x	36	46.9 w	61.5	61.5	61.5	69	69	69	69	69	69	69
Z Pa.	96	12½	33	45	50	1 or ½	38	800	20	30 H	40 H	45	45	45	56	65	65	65	NP	NP	NP
R. I.	102	12½	35	45	45	1 or ½	NS	800	22.4	32-P 28-S	40	*55* 46	*55* 46	*55* 46	64-P 56-S	72-P 68-S	72-P 68-S	80	NP	NP	NP
X S. C.	96	12½	40	50	50	1 or ½	40	NR	18-I 16-J	32	40	50	50	50	50	50	50	50	NP	NP	NP
XZ S. D.	96	13	35	50	50	1 or ½	40	600	18-I 16-J	36	50	56.4	56.4	56.4	56.4	56.4	56.4	56.4	NP	NP	NP
Tenn.	96	12½	35	45	45	1 or ½	40	NS	18	36	42	42	42	42	42	42	42	42	NP	NP	NP
X Tex.	96	12½	35	45	45	1 or ½	40	650-I 600-J	18-I 16-J	36	48	48	48	48	48	48	48	48	NP	NP	NP
XZ Utah	96	14½	45	60	60	1 or ½	NS	800 o	18-P 13.5-S	36	50	78.2	78.2	78.2	78.2	78.2	78.2	78.2	NP	NP	NP
Z Vt.	96	12½	50	50	50	1 or ½	40	800	NR	*28* M 16	40 M 16	40 M 46	40 M 16	40 M 16	40 M 16	40 M 16	40 M 16	40 M 16	NP	NP	NP
VZ Va.	96	12½	33 g	45	45	1 or ½	40	650	*18* 16	*32* 24	*40* 35	*40* 35	*40* 35	*40* 35	*40* 35	*40* 35	*40* 35	*40* 35	NP	NP	NP
X Wash.	96	12½	35	60	60	1 or ½	NS	500	18	28	35	54	69	69	69	69	69	69	NP	NP	NP
W¹XZ W. Va.	96	12½	35	45	45	NR	40	NS	18-PB 14-SB	36-PWB 28-SB	54-PWB 42-SB	54-PWB 42-SB	72-PWB 56-SB	90-PWB 70-SB	72-PWB 56-SB	90-PWB 70-SB	90-PWB 70-SB	102.4PB 81.9-SB	90-PWB 70-SB	102.4PB 81.9-SB	102.4PB 81.9-SB
V Wisc.	96 d	12½	35	45	45	1 or ½	40	800	19-C 12-D	30-Ck 15-D	54-C 32-D	54-C 38-D	63-C 38-D	63-C 38-D	63-C 38-D	63-C 38-D	63-C 38-D	63-C 38-D	NP	NP	NP
X Wyo.	96	12½	40	50	60	2	NS	800	18-I 16-J	36	52.7	54	61.2	61.2	69.7	69.7	69.7	69.7	69.7	69.7	69.7

Italic figures denote limit now effective by proclamation or order of Governor or other Official.

‖—See Note at right.

a—If registered before 1932.

b—At rear tires, when solids changed to pneumatics.

c—Regulated "for hire" vehicles.

d—104 inches for urban buses.

e—If less than 50 inches apart.

f—If less than 8 feet apart.

g—Buses allowed 35 ft. length.

h—Trailers are limited to 26 ft.

o—Graduated according to tire width.

p—13,000 lbs. on tandem axles 8 ft. 6 in. apart; applies June 1 to Feb. 28; differs with season.

q—500 lbs. when total tires under 30 inches wide.

t—Dual tires 8 in. wide or over.

w—Permissible weight on paved highways.

x—Permissible weight on unpaved highways.

z—City of Clinton, Ill., limits truck gross weight to 12,000 lbs.

B—In "Industrial Areas"—varies for different "areas."

C—Permissible on "Class A" highways.

D—Permissible on "Class B" highways.

E—Applicable when axles are spaced 18 ft. or more apart. Lower line shows limits when axles are less than 18 ft. apart.

G—Axles less than 10 ft. apart limited to 16,000 lbs.

H—Maximum shown — gross depends on chassis weight.

I—Permissible on balloon tires.

J—Permissible on other than balloon tires.

K—May exceed on designated highways with permit.

L—Buses permitted 22,500 maximum net weight.

M—On State highways.

N—40,000 lbs. with pneumatic tires, 3 axles, 2 hubs and brakes on each hub.

NP—Not permitted.

NR—No restriction.

NS—Not specified.

P—Pneumatic tires.

PL—Pay load.

Q—If equipped with power brakes.

S—Solid tires.

T—With the following exceptions full trailers are permitted the same gross weight as other single units:—Ala., Iowa, Conn., Ky.—Full trailers prohibited.

Ill.—All trailers limited to 32,000 lbs. gross.
Mass.—Trailers limited to 1,000 lbs. capacity.
Neb.—All trailers limited to 16,000 lbs. gross.
N. Dak.—Trailers, 35,000 lbs. Weight of trailers is limited by axle limitations and formula, in states determining gross weight by formula.

Table—There is a table of axle weights based upon tire widths.

V—Solid tires prohibited.

V¹—Solid tires prohibited except on property carrying vehicles operating 10 mph or less.

V²—Solid tires limited to 20 miles per hour under 10,000 lbs., and to 12 mph over 10,000 lbs.

W—See Note above.

W¹—Maximum gross when all axles carry maximum load—See "Note" above.

X—States where gross weight is determined by formula (See State under "Bridge Formulas" in next column and formula computations on next page).

Z—See "Restrictions Peculiar to Certain States" on next page.

NOTE ON "W" AND SHADED SQUARES

Except when shown in squares shaded with parallel lines or when followed by the letter "W," the above gross weight limits are the limits fixed by state law.

When shown in shaded squares the above limits are computations made by the National Highway Users Conference to show what it considers to be practical gross weights where gross weights are arrived at by application of one of the formulae shown below under Footnote "X." In making these computations, wheel base was arrived at by deducting 8 ft. total over-hang front and rear from permissible overall length of unit or combination; tandem axles were considered to be a minimum permissible distance apart: H-20 bridge formula was used in West Virginia. When actual over-hang is less than 8 ft. additional gross weight will be possible.

When followed by the letter "W," the limits shown are maximum possible weights where gross weight is determined by permissible axle weight. These limits are possible only when each axle carries a gross weight equal to the permissible axle limit as shown.

BRIDGE FORMULAS

Ala.—700 (L plus 40) on any unit or combination.

Ariz.—800 (L plus 40) new vehicles; 850 (L plus 40) vehicles registered before June 9, 1945 until Jan. 1, 1955; 700 (L plus 40) new vehicles with axle spacing 18 feet or less; 750 (L plus 40) vehicles registered before June 9, 1945 until Jan. 1, 1955, axle spacing between 14 and 18 feet.

Ark.—650 (L plus 40) if axle spacing is 18 ft. or less; 750 (L plus 40) if over 18 ft.

Cal.—Table based on 700 (L plus 40) if axles spaced 18 feet or less, 800 (L plus 40), if over 18 feet.

Colo.—750 (L plus 40).

Ga.—Same as Ala.

Ind.—750 (L plus 40) two or more consecutive axles and any unit or combination.

Iowa—650 (L plus 40) if axle spacing 18 ft. or less; 700 (L plus 40) if over 18 ft.

Kans.—700 (L plus 40) only applies to combinations.

Md.—750 (L plus 40) any unit or combination.

Minn.—750 (L plus 40).

Mont.—650 (L plus 40) for axle spacing to 20 ft. and 750 (L plus 40) above 20 ft.

Nebr.—Same as Md.

N.M.—750 (L plus 40) two or more consecutive axles and any unit or combination.

N. Y.—750 (L plus 40) three or more consecutive axles and any unit or combination.

N. Dak.—750 (L plus 40) any unit or combination.

Ohio—750 (L plus 40) 3 or more axles.

Ore—Same as Ala.

S. C.—700 (L plus 40).

S. D.—600 (L plus 40) any unit or combination.

Tenn.—Same as Ala.

Texas—Same as Ala.

Utah—Same as Ala.

Wash.—750 (L plus 40) any unit or combination if axle spacing over 18 feet; 650 (L plus 40) if axle spacing 18 feet or less.

W. Va.—1330-1000-670 (L plus 40) apply to highways dependent on bridge types thereon.

Wyo.—850 (L plus 30) any unit or combination if axle spacing over 18 feet; 650 (L plus 40) if axle spacing 18 ft. or less.

NATIONAL HIGHWAY USERS CONFERENCE, National Press Bldg., Washington, D. C. **(Copyright 1947)**

The Conference also publishes state restrictions on sizes and weights in detailed, diagrammatic, loose-leaf form.

Gross Weights Computed by Formulas

Computation of Gross Weights according to formulas, based on distance (in feet) between first and last axles, for States identified by State Size & Weight Limits chart by Footnote "X." It should be remembered that the figures in each column represent only a mathematical extension and are governed by Legal Overall Length Limits for single units and combinations of particular states. Also, that formula computations are superseded in some instances by specific limits given in the chart.

"L" (See Note Below)	South Dakota	Ark.[1] Iowa[2] Minnesota[2] Missouri[2] Nebraska[2] New Mexico[2] North Dakota[2] Washington[2]	West Virginia (H-10 Bridges)	Alabama, Ariz.,[3] Georgia, Indiana, Iowa, Kansas, Missouri, S. Car., Tenn., Texas, Utah	Ariz.,[10] Colo., Md., Minn., Neb., N. Mex., N. Y., N. Dak., Ore., Wash.	Ohio	West Virginia (H-15 Bridges)	West Virginia (H-20 Bridges)	Arizona	Arizona[11]	Wyoming
	600 (L + 40)	650 (L + 40)	670 (L + 40)	700 (L + 40)	750 (L + 40)	750 (L + 48)	1000 (L + 40)	1330 (L + 40)	800 (L + 40)	850 (L + 40)	850 (L + 30)
10 ft.	30000 lb.	32500 lb.	33500 lb.	35000 lb.	37500 lb.	43500 lb.	50000 lb.	66500 lb.	..... lb.	..... lb.	..... lb.
11	30600	33150	34170	35700	38250	44250	51000	67830	.....	.....	.....
12	31200	33800	34840	36400	39000	45000	52000	69160	.....	.....	.....
13	31800	34450	35510	37100	39750	45750	53000	70490	.....	.....	.....
14	32400	35100	36180	37800	40500	46500	54000	71820	43200	.....	37400
15	33000	35750	36850	38500	41250	47250	55000	73150	44000	.....	38250
16	33600	36400	37520	39200	42000	48000	56000	74480	44800	.....	39100
17	34200	37050	38190	39900	42750	48750	57000	75810	45600	.....	39950
18	34800	37700	38860	40600	43500	49500	58000	77140	46400	.....	40800
19	35400	38350	39530	41300	44250	50250	59000	78470	47200	.....	41650
20	36000	39000	40200	42000	45000	51000	60000	79800	48000	.....	42500
21	36600	39650	40870	42700	45750	51750	61000	81130	48800	.....	43350
22	37200	40300	41540	43400	46500	52500	62000	82460	49600	.....	44200
23	37800	40950	42210	44100	47250	53250	63000	83790	50400	.....	45050
24	38400	41600	42880	44800	48000	54000	64000	85120	51200	.....	45900
25	39000	42250	43550	45500	48750	54750	65000	86450	52000	55250	46750
26	39600	42900	44220	46200	49500	55500	66000	87780	52800	56100	47600
27	40200	43550	44890	46900	50250	56250	67000	89110	53600	56950	48450
28	40800	44200	45560	47600	51000	57000	68000	90440	54400	57800	49300
29	41400	44850	46230	48300	51750	57750	69000	91770	55200	58650	50150
30	42000	45500	46900	49000	52500	58500	70000	93100	56000	59500	51000
31	42600	46150	47570	49700	53250	59250	71000	94430	56800	60350	51850
32	43200	46800	48240	50400	54000	60000	72000	95760	57600	61200	52700
33	43800	47450	48910	51100	54750	60750	73000	97090	58400	62050	53550
34	44400	48100	49580	51800	55500	61500	74000	98420	59200	62900	54400
35	45000	48750	50250	52500	56250	62250	75000	99750	60000	63750	55250
36	45600	49400	50920	53200	57000	63000	76000	101080	60800	64600	56100
37	46200	50050	51590	53900	57750	63750	77000	102410	61600	65450	56950
38	46800	50700	52260	54600	58500	64500	78000	103740	63400	66300	57800
39	47400	51350	52930	55300	59250	65250	79000	105070	63200	67150	58650
40	48000	52000	53600	56000	60000	66000	80000	106400	64000	.....	59500
41	48600	52650	54270	56700	60750	66750	81000	107730	64800	.....	60350
42	49200	53300	54940	57400	61500	67500	82000	109060	65600	.....	61200
43	49800	53950	55610	58100	62250	68250	83000	110390	66400	.....	62050
44	50400	54600	56280	58800	63000	69000	84000	111720	67200	.....	62900
45	51000	55250	56950	59500	63750	69750	85000	113050	68000	.....	63750
46	.....	55900	.....	60200	64500	70500	.....	.....	68800	.....	64600
47	.....	56550	.....	60900	65250	71250	.....	.....	69600	.....	65450
48	.....	57200	.....	61600	66000	72000	.....	.....	70400	.....	66300
49	.....	57850	.....	62300	66750	72750	.....	.....	71200	.....	67150
50	.....	58500	.....	63000	67500	73500	.....	.....	72000	.....	68000
51	.....	59150	.....	63700	68250	74250	.....	.....	72800	.....	68850
52	.....	59800	.....	64400	69000	75000	.....	.....	73600	.....	69700
53	.....	60450	.....	65100	69750	75750	.....	.....	74400	.....	70550
54	.....	61100	.....	65800	70500	76500	.....	.....	75200	.....	71400

"L"—distance in feet between first and last axles of group of axles considered.

[1]—Arkansas vehicles with axles spaced not more than 7 ft. apart.

[2]—Arkansas vehicles with axles spaced over 7 ft. apart.

[3]—Montana vehicles with axles spaced not more than 20 ft. apart.

[4]—Montana vehicles with axles spaced over 20 ft. apart.

[6]—Vehicles with axles spaced 18 t. or less.

[9]—In Arizona this applies (up to 18 feet) to any two or more axles on any vehicle or combination which was first registered on or after June 9, 1945.

[10]—This applies to any vehicle or combination, which was first registered prior to June 9, 1945, having a group of two or more axles, where the distance between the first and last axles of the group is between 14 and 18 ft., inclusive.

[11]—This applies to any vehicle or combination first registered prior to June 9, 1945, where the total wheel base is between 25 and 45 ft., inclusive.

Restrictions Peculiar to Certain States

ARK..... Maximum gross weights subject to maximum capacity based on tire sizes. Tolerance of 7½ per cent is allowed above allowances listed per tire sizes shown in Table (NHUC Size & Weight Book), but maximum axle weight is limited to 16,000 lbs. Vehicle weight allowances shown in State Size & Weight Limits chart are calculated on the basis of 8,000 lbs. on the front axle and 16,000 lbs. on all others. Single unit buses allowed axle weight of 17,600 lbs. if equipped with dual mounted low pressure tires not less in size than 10.50 x 22 in.

CAL..... Maximum gross weights are based on a table of axle spacing graded from 30,100 lbs. if axle spacing is 3 ft., to 76,800 lbs. if axle spacing is 56 ft.

CONN... Not more than 80 per cent of vehicle gross on any one axle.

DELA.... Gross weights are based on table graduated from 20,000 lb. if axle spacing is less than 4 ft., to 60,000 lb. if 39 ft. or more.

D. C..... Solid tires, when permitted, allowed 10 per cent less than pneumatics.

MO..... Special size and weight limitations apply in cities of 75,000 population or over.

MONT... Maximum gross weights are based on a table of axle spacing graded from 32,000 lbs. if axle spacing is 4 ft., to 73280 lbs. if axle spacing is 57 ft.

ORE..... Highway Commission authorized length of 60 feet and gross weight of 68,000 lbs. for civilian cargoes as well as Army and Navy goods. The greatest allowances shown in State Size & Weight Limit chart are permitted on paved highways, and the lowest allowances are the maxima permitted on unpaved highways.

PA..... Six-wheelers must have minimum axle spacing of 36 in. between the two rear axles. Buses operating within municipalities exempted from 18,000 lbs. axle and 26,000 lbs. gross limits.

S. DAK.. Maximum gross weights are based on a table of axle spacing graded from 32,000 lbs. if axle spacing is 4 ft., to 64,650 lbs. if axle spacing is 45 ft.

UTAH... Maximum gross weights are based on a table of axle spacing graded from 33,000 lbs if axle spacing is 4 ft., to 79,900 lbs. if axle spacing is 56 ft.

VT..... The greatest allowances shown in State Size & Weight Limit chart are permitted on state highways, medium allowances are the maxima permitted on state-aid highways, and the lowest allowances are the maxima permitted on other highways.

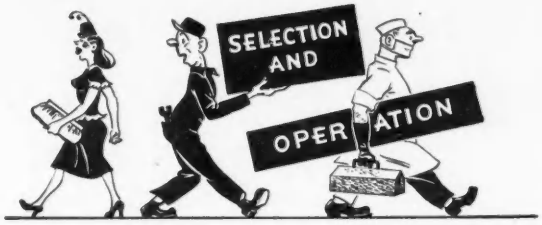
VA..... Two-axled vehicles with six-wheels permitted 32,000 lbs. gross.

W.VA.... No unit may carry a load more than 100 per cent greater than its registered capacity if registered for not over two tons; or more than 50 per cent greater if registered for over two but not over four tons; or more than 25 per cent greater if registered for over four tons.

by

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How to Figure LEGALITY

As to Permissible Size & Weight of a Vehicle in Interstate Operation

There is an ideal vehicle for every job but an operator may have to modify this ideal because of legislative restrictions; here is an example of how to do the figuring

1. The first step in determining the requirements of any motor transport operation is a careful consideration of the commodity to be transported, its nature, weight and bulk, method of loading and unloading, frequency of trips, distance to be travelled, nature of terrain, grades to be climbed and every other factor that might be considered a part of the cycle of operation.

2. The second step is to select the ideal vehicle, from the standpoint of type and size, to do the job.

3. The third step is to check the legality of this ideal vehicle and, if necessary, to modify the selection so as to comply with legal restrictions.

4. The fourth step is to develop an operation cost estimate based on the legal equipment that must be used and upon the particular operation to be accomplished, in order to determine whether it will be profitable and therefore justifiable.

5. Determining legality is a highly important step in this process. Too frequently, due to lack of uniformity and to confliction of state size and weight laws, the ideal type and size of vehicular equipment to efficiently and economically accomplish a job, is not permitted to operate.

6. The size and weight restrictions of but one given state may not be unduly difficult to surmount. But when three, four, five or more states are involved the problem becomes highly complicated. The ideal selection might be legal in all but one of these several states. Yet the restrictions of that one bottle-neck state could compel the use of a far less suitable type and size of vehicle, resulting in lower operating efficiency and consequently higher cost per load-unit transported.

7. In order to show how size and weight restrictions can affect the choice of equipment let us take as an example (and one that is reasonably simple as compared to others of far greater complexity) a fictitious transport operation between Chicago, Illinois, and Albuquerque, New Mexico.

8. This operation involves travel through five states: Illinois, Missouri, Oklahoma, Texas and New Mexico. No two of these states have the same size and weight laws, with the single exception of overall width. All other restrictions are different and considerably so.

9. Before it is possible to proceed with consideration of restrictions, it is necessary to know what those restrictions are. A current copy of "State Restrictions on Motor Vehicle Sizes and Weights," published by the National Highway Users Conference, Washington, D. C., will supply this deficiency. Actual copies of the statutes of these states would serve the purpose if one were qualified to properly interpret them, which the average person is not. The NHUC presents the various types of vehicles and combinations graphically with the various restrictions clearly shown so that no error should be made.

10. Referring to the NHUC size and weight reproductions illustrating this article, it will be noted that the restrictions of each of the five states involved in this example are covered in the same uniform and simple manner diagrammatically, with, in addition, only the essential detailed explanations necessary to provide full clarification. In addition, a blank NHUC size and weight interpretation sheet has been filled out, based on the most restrictive limitations of all five states having been considered jointly.

11. This sixth sheet, being a correlation of all five states involved, in this particular case, might be termed "A State of Restricted Sizes and Weights Between Chicago and Albuquerque." Let's look at this "Restricted State" and see just where these limitations originate—and terminate.

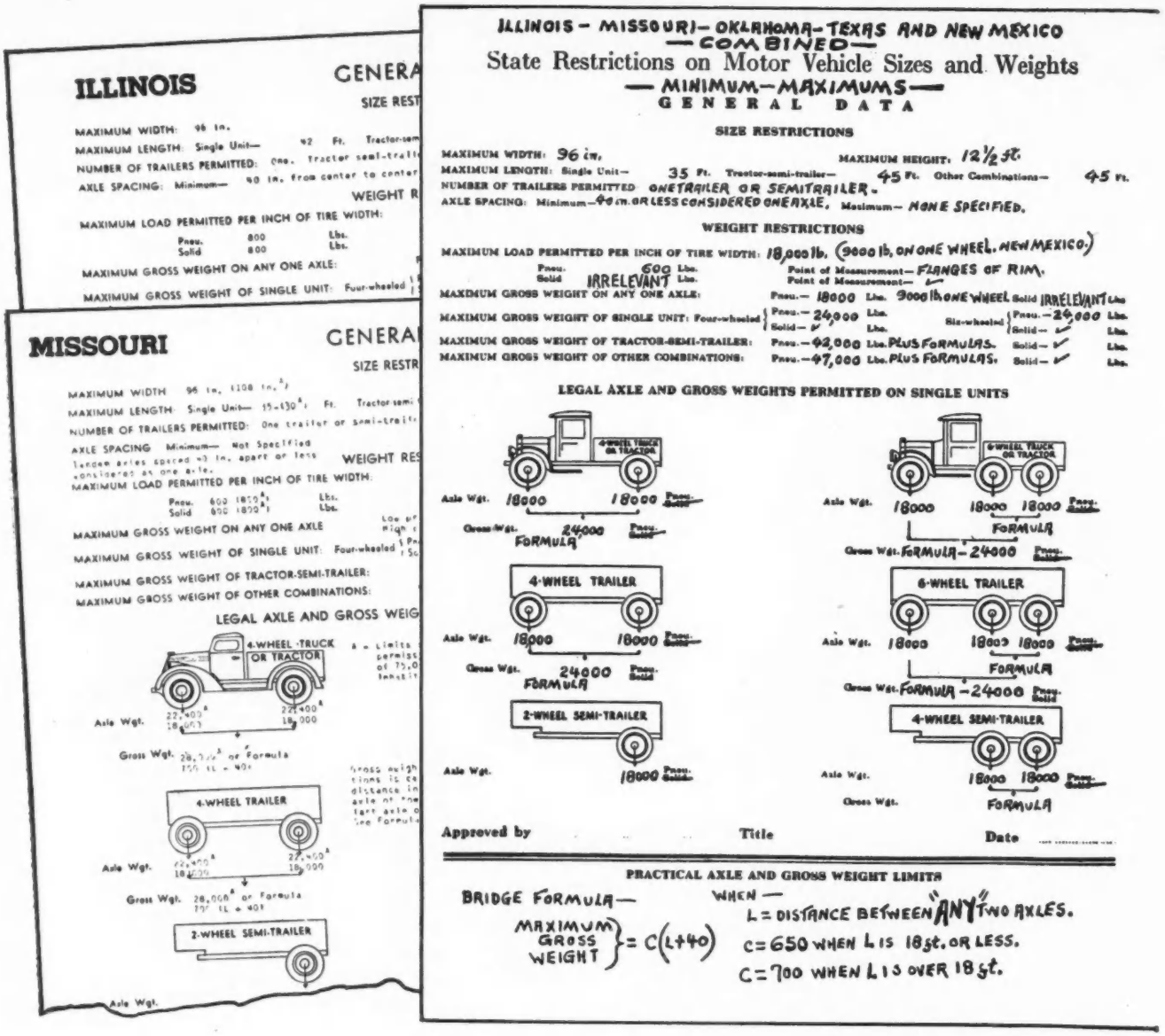
12. With the basic assumption that "the nature of this particular operation demands the maximum permissible net payload, from both standpoints of loading space and weight," we know to begin with that some form of vehicle combination is required rather than a single straight truck alone, i.e., either the single bottom of a tractor semi-combination; the double bottom of a tractor-semi and full trailer, or of a truck and full trailer; or possibly a three-bottom combination consisting of truck and two full trailers entrained.

13. First of all, we find, in the individual state interpretations, that the 96-in. "Maximum Width" restriction is common to each of these states. This width restriction, therefore, is set down in the space provided in the upper left-hand corner of the correlation sheet.

14. A check of the Maximum Heights permitted in these five states shows 12½ ft. for all except Illinois, where there is no restriction. Therefore 12½ ft. is set in on the correlation sheet.

15. All states permit 35 ft. overall length for a single vehicle except Illinois and Oklahoma, which permit 42 and 45 ft. respectively. Thirty-five feet, therefore, be-

(TURN TO NEXT PAGE, PLEASE)



ILLINOIS

MAXIMUM WIDTH: 96 in.
MAXIMUM LENGTH: Single Unit— 42 Ft. Tractor-sem
NUMBER OF TRAILERS PERMITTED: One. Tractor semi-trail
AXLE SPACING: Minimum— 40 in. from center to center

WEIGHT R

MAXIMUM LOAD PERMITTED PER INCH OF TIRE WIDTH:
Pneu. 800 Lbs.
Solid 800 Lbs.

MAXIMUM GROSS WEIGHT ON ANY ONE AXLE:
MAXIMUM GROSS WEIGHT OF SINGLE UNIT: Four-wheeled

MISSOURI

MAXIMUM WIDTH: 96 in.
MAXIMUM LENGTH: Single Unit— Ft. Tractor-semi
NUMBER OF TRAILERS PERMITTED: One trailer or semi-trail
AXLE SPACING: Minimum— Not Specified
Tandem axles spaced 40 in. apart or less considered as one axle.

WEIGHT RES

MAXIMUM LOAD PERMITTED PER INCH OF TIRE WIDTH:
Pneu. 600 Lbs.
Solid 600 Lbs.

MAXIMUM GROSS WEIGHT ON ANY ONE AXLE
MAXIMUM GROSS WEIGHT OF SINGLE UNIT: Four-wheeled
MAXIMUM GROSS WEIGHT OF TRACTOR-SEMI-TRAILER:
MAXIMUM GROSS WEIGHT OF OTHER COMBINATIONS:

LEGAL AXLE AND GROSS WEIG

4-WHEEL TRUCK OR TRACTOR
Axle Wgt. 22,400 18,000
Gross Wgt. Formula
4-WHEEL TRAILER
Axle Wgt. 22,400 18,000
Gross Wgt. 28,000 or Formula
2-WHEEL SEMI-TRAILER
Axle Wgt.

ILLINOIS - MISSOURI - OKLAHOMA - TEXAS AND NEW MEXICO
— COMBINED —
State Restrictions on Motor Vehicle Sizes and Weights
— MINIMUM - MAXIMUMS —
GENERAL DATA

SIZE RESTRICTIONS

MAXIMUM WIDTH: 96 in. MAXIMUM HEIGHT: 12½ ft.
MAXIMUM LENGTH: Single Unit— 35 Ft. Tractor-semi-trailer— 45 Ft. Other Combinations— 45 Ft.
NUMBER OF TRAILERS PERMITTED ONE TRAILER OR SEMITRAILER.
AXLE SPACING: Minimum— 40 in. OR LESS CONSIDERED ONE AXLE. Maximum— NONE SPECIFIED.

WEIGHT RESTRICTIONS

MAXIMUM LOAD PERMITTED PER INCH OF TIRE WIDTH: 18,000 lb. (9000 lb. ON ONE WHEEL. NEW MEXICO.)
Pneu. 600 Lbs. Point of Measurement— FLANGES OF RIM.
Solid IRRELEVANT Lbs. Point of Measurement— ✓
MAXIMUM GROSS WEIGHT ON ANY ONE AXLE: Pneu.— 18000 Lbs. 9000 lb ONE WHEEL Solid IRRELEVANT Lbs.
MAXIMUM GROSS WEIGHT OF SINGLE UNIT: Four-wheeled { Pneu.— 24,000 Lbs. / Solid— ✓ Lbs. } Six-wheeled { Pneu.— 24,000 Lbs. / Solid— ✓ Lbs. }
MAXIMUM GROSS WEIGHT OF TRACTOR-SEMI-TRAILER: Pneu.— 42,000 Lbs. PLUS FORMULAS. Solid— ✓ Lbs.
MAXIMUM GROSS WEIGHT OF OTHER COMBINATIONS: Pneu.— 47,000 Lbs. PLUS FORMULAS. Solid— ✓ Lbs.

LEGAL AXLE AND GROSS WEIGHTS PERMITTED ON SINGLE UNITS

4-WHEEL TRUCK OR TRACTOR
Axle Wgt. 18000 18000 Pneu. Solid
Gross Wgt. 24000 FORMULA Pneu. Solid
4-WHEEL TRAILER
Axle Wgt. 18000 18000 Pneu. Solid
Gross Wgt. 24000 FORMULA Pneu. Solid
2-WHEEL SEMI-TRAILER
Axle Wgt. 18000 Pneu. Solid

6-WHEEL TRUCK OR TRACTOR
Axle Wgt. 18000 18000 18000 Pneu. Solid
Gross Wgt. FORMULA — 24000 Pneu. Solid
6-WHEEL TRAILER
Axle Wgt. 18000 18000 18000 Pneu. Solid
Gross Wgt. FORMULA — 24000 Pneu. Solid
4-WHEEL SEMI-TRAILER
Axle Wgt. 18000 18000 Pneu. Solid
Gross Wgt. FORMULA

Approved by ... Title ... Date ...

PRACTICAL AXLE AND GROSS WEIGHT LIMITS

BRIDGE FORMULA — WHEN —

MAXIMUM GROSS WEIGHT } = C(L+40)

L = DISTANCE BETWEEN "ANY" TWO AXLES.
C = 650 WHEN L IS 18 ft. OR LESS.
C = 700 WHEN L IS OVER 18 ft.

Shown at extreme left and right are NHUC state size and weight limit digests. The two forms in the center are

How to Figure LEGALITY . . .

(Continued from Page 77)

comes our restriction in the correlation.

16. Oklahoma permits 60 ft. overall length for a tractor-semi-trailer combination; however, this liberality is washed out by the penuriousness of the other four states, which permit but 45 ft. This 45 ft. then becomes the restriction for our new state and is set in on the correlation sheet.

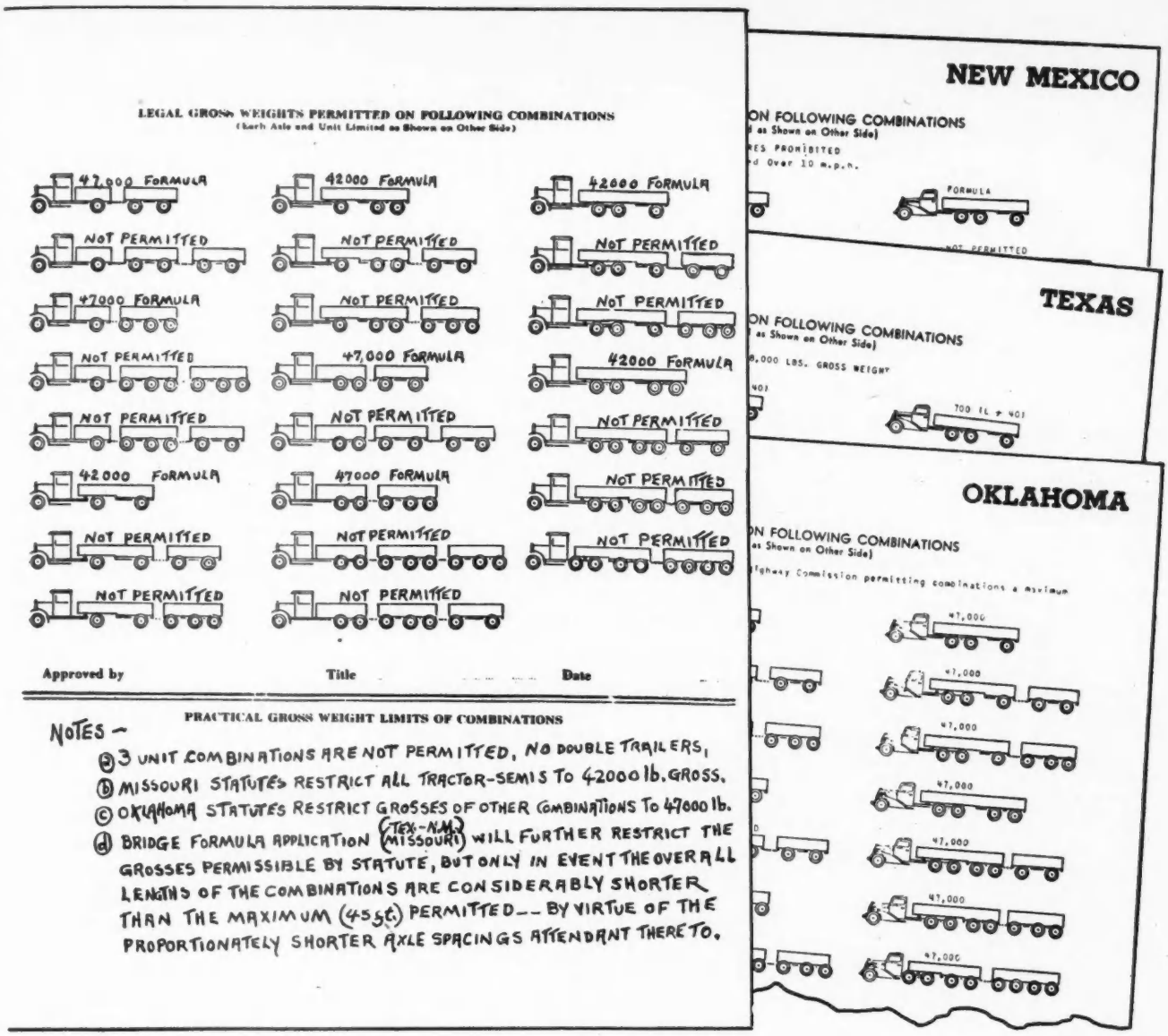
17. The overall length restriction for "other combinations," in Oklahoma, is also 60 ft.; however, the other five permit but 45 ft.; therefore, our Chicago to Albuquerque operation is stuck with 45 ft. in the correlation.

18. Illinois and Oklahoma do permit the operation of the three-unit double-bottom combination consisting of tractor, semi- and full trailer; however, as the other three states do not, our correlation must show that either "one semi-trailer or one full trailer may be towed" by a powered vehicle.

19. "Axle spacing," in each of these States, except Oklahoma, is limited to 40 ins. By this is meant that "any two axles spaced 40 ins. or less, center to center, for purposes of load restriction, are considered the same as one axle."

20. Every one of these five states has some sort of load restriction per inch of tire width, Illinois having 800 lb., Missouri, Oklahoma and New Mexico each having 600 lb., while Texas permits 650 lb. per inch. Illinois does not specify where this width shall be measured; Missouri's point of measurement is the "flanges of the rim" (whatever that might be); Oklahoma measures at the point of "contact with the road"; New Mexico specifies "manufacturer's rating"; while Texas does not specify the measuring point. This leaves our theoretical control with the 600 lb. of load per inch of tire width, measured at the "flanges of the rim" as specified by Missouri. There need be no concern wasted on such an obsolete horse and buggy days' restriction, however, because modern low pressure tires, of the proper capacity for the load to be carried, in keeping with operators' standard practice, based upon tire manufacturers' capacities, will invariably and easily meet this restriction. We set this restriction in, however, on our correlation sheet.

21. Oklahoma has no maximum gross weight on any one axle restriction. The other four states are uniform in their 18,000-lb. restriction; however, New Mexico comes in with a further nonsensical restriction of a 9000-lb. load on the indi-



interpretation sheets upon which the legal limits have been summarized mathematically and diagrammatically

vidual wheel. Our axle load restriction, therefore, becomes 18,000-lb., plus New Mexico's 9000-lb. wheel load restriction, and is thus shown on our correlation sheet.

22. Although Missouri, Texas and New Mexico inject a "Bridge Formula" restriction into the gross weight permitted for any vehicle or combination, it will never be effective in restricting the gross load of a "practical" single vehicle unit to less than Oklahoma's statutory restriction of 24,000 pounds, regardless of the number of axles involved or of their spacing. Another ridiculous situation exists in this connection in Illinois. Although the Illinois statute does permit a four-wheel vehicle of 36,000 lb. to operate on its highways, another statute makes it impossible to obtain a license for more than 24,000 lb.

In view of the above, the correlation sheet restriction on "Maximum Gross Weight of Any Single Vehicle" for these five states, jointly considered, becomes the same as that of Oklahoma, i.e., 24,000 lb.

23. As previously mentioned, Missouri, Texas and New Mexico inject "bridge formula" restrictions into their laws to restrict gross weights of either single vehicles or of any type of combination that may be permitted, and no two of these formulas are exactly alike. For ready comparison, these formulas are shown below:

GW=Gross Weight; C=Multiplier
L=Spacing between ANY TWO axles.

Missouri—

$GW = C\ (L + 40)$
C=700 when L is over 18 ft.
C=650 when L is 18 ft. or less.

Texas—

$GW = 700\ (L + 40)$

New Mexico—

$GW = C\ (L + 40)$
C=750 when L is over 18 ft.
C=650 when L is 1 ft. or less.

Illinois and Oklahoma do not use the bridge formula, as these States have established various maximum gross weight limitations by statute for the various types of vehicles and of combinations.

24. For the "Tractor Semi-trailer Combination," these five states show up in this manner:

Illinois—

2 axle tractor with 1 axle semi-trailer—45,000 lb.
2 axle tractor with 2 axle semi-trailer—59,000 lb.
3 axle tractor with 1 axle semi-trailer—59,000 lb.
3 axle tractor with 2 axle semi-trailer—59,000 lb.

Missouri—

Any tractor semi-trailer combination regardless of the number of axles. — 42,000 lb. of formula, whichever is the lesser.

Oklahoma—

Any tractor semi-trailer combination regardless of the number of axles. — 47,000 lb.

(TURN TO NEXT PAGE, PLEASE)

How to Figure LEGALITY . . .

(Continued from Page 79)

Texas—

Any tractor semi-trailer combination regardless of the number of axles.	Bridge Formula only.

New Mexico—

Any tractor semi-trailer combination regardless of the number of axles.	Bridge Formula only.

Recalling to mind our original and basic assumption outlined in paragraph 12, that "the nature of this particular Chicago to Albuquerque operation demands the maximum permissible net payload, from both standpoints of loading space and weight", it is readily seen that because we must take advantage of the full 45 ft. maximum overall length permitted in these states so as to attain the maximum loading space, the bridge formula would not apply. The effective restriction on gross weight for a tractor semi-trailer combination on this particular operation, therefore, becomes the 42,000 lb. statutory limitation imposed by Missouri, and it is therefore inserted on our correlation sheet.

25. The same bridge formulas, as detailed in paragraph 24, are also effective in connection with "Other Combinations" (other than tractor-semis).

A state breakdown in this connection shows:

Illinois—
- Various statutory limitations on grosses for various combinations:
  - 2 axle truck with 2 axle full trailer—63,00 lb.
  - 2 axle truck with 3 axle full trailer—63,00 lb.
  - 3 axle truck with 2 or 3 axle full trailer—72,000 lb.
  - Any other permissible "Other Combination"—72,000 lb.

Missouri—
- Any permissible "Other Combination"—56,000 lb. subject to formula.

Oklahoma—
- Any permissible "Other Combination"—47,000 lb.

Texas—
- Any permissible "Other Combination"—Bridge Formula only.

New Mexico—
- Any permissible "Other Combination"—Bridge Formula only.

A study of these various restrictions on "Other Combinations" readily discloses that the application of the bridge formulas, based on the 45 foot maximum overall length allowable, would permit more gross than the statutory restriction of 47,000 pounds imposed by Oklahoma; therefore, 47,000 pounds, subject to further reduction by bridge formula, only in event the maximum length were not utilized, becomes the controlling gross for "other combinations" on our correlation sheet.

26. Again recalling our basic assumption that "this operation demands the maximum permissible payload space and net weight," it is readily seen that at least some more loading space is available by selection of a tractor and semi-trailer combination in preference to a double bottom, because the length of the single body of the tractor-semi combination of 45 feet overall length can be approximately 3½ feet longer than the combined lengths of two bodies of any "Other Combination" of the same overall length, on account of draw-bar spacing and double bulkhead thickness losses. This reasoning definitely indicates a tractor and semi-trailer combination from the standpoint of loading space.

27. From the standpoint of maximum net payload weight, having in mind that the tractor-semi may gross but 42,000 lbs., while the double bottom combination truck and full trailer may gross 47,000 (as shown on the correlation sheet), some further consideration is necessary. For purpose of illustration, the following entirely fictitious weights are assumed—

If the tractor with its cab and fifth wheel mounted weighs approximately 8,000 lb., and the 35 ft. (approx.) semi-trailer and body weighs another 8000 lb., (a total of around 16,000 lb. of vehicular equipment), the 42,000 lb. gross permitted will allow 26,000 lb. of net payload for the tractor-semi combination. If the long wheelbase straight truck chassis with cab weighs 8500 lb., its 16 ft. body weighs 3500 lb. and the 16 ft. four wheel full trailer adds another 8500 lb. and we have a total of 20,500 lb. of vehicles; then the 47,000 lb. gross permitted will allow around 26,500 lb. of net payload for the double bottom, with approximately 32 ft. of loading space.

28. Theoretically, these "guestimated" weights won't be too far wrong for substantial, properly powered and equipped. refrigerated equipment. It is readily seen that the choice must be made between the four-wheel tractor, two wheel semi. single bottom and the double-bottom combination consisting of the four wheel truck and four-wheel full trailer.

29. In order to determine which combination should be selected, at least the following comparisons must be made—with full consideration for the nature of the commodity to be hauled and for the cycle of the operation as well.

(a) Tractor-semi requires 10 tires, 10.00-22.
(b) Truck and trailer requires 14 tires, 9.00-22.
(c) Tractor-semi permits approximately 3½ ft. more loading space.
(d) Truck and trailer permits 500 lb. (plus) more net payload.
(e) Tractor-semi involves less initial investment and because of lesser gross, probably lower operation cost.
(f) Truck and trailer requires heavier power plant, etc., more fuel, etc., because of greater gross involved.
(g) Tractor-semi probably safer to operate (debatable).
(h) Truck and trailer permits cutting loose and operating truck independently.
(i) And many others, advantageous to either one or the other of these combinations.

30. It is seen from the foregoing that determination of the legality of motor transport equipment is not as simple as first thought would have it. The difficulty involved and the fact that there are now many pieces of illegal equipment in operation, only brings out again the need for uniform motor vehicle size and weight laws.

31. Reciprocity, while a gesture in the right direction, and much needed among states for other reasons, is not the answer to the size and weight problem. If a group of states are fully reciprocal with each other, a vehicle legal in its own state is permitted to operate unmolested in the others regardless of the differences in their size and weight laws. This is patently unfair to operators with vehicles registered in those less liberal states, because they are limited by the size and weight laws of their own state, while the operator registered in the more liberal state, as long as he complies with the laws of his own state, may carry his heavier loads into that less liberal state, to the disadvantage of the locally registered vehicle.

32. As before stated, the example outlined herein involves the correlation of the laws of but five states, and care was exercised to select a particular group of five, which, while clearly illustrating the principles and procedures involved, would also involve but a minimum of complexities.

33. Generally speaking, the common carrier does not become involved with these complications to anywhere near the same extent as the contract hauler and the private operator of heavy equipment. The common carrier is generally willing to stretch his equipment to the maximum lengths permitted by the laws so as to get the widest possible spacing of axles and thus take the fullest advantage of bridge formula loading where a statutory maximum gross does not interfere. This is very frequently an impossibility to the contract hauler and the private operator, who, because of the very nature of their operations must use a far more specialized type of vehicular equipment, precisely planned for its end use rather than planned to circumvent the law.

34. Look over the laws of Ohio, West Virginia, New York, Florida and others, then laugh or frown according to your temperament; then try working out one of these correlations yourself, say from Chicago to New Orleans; Chicago to Jacksonville; Chicago to Boston; etc.; you'll find them both interesting and complicated, also exasperating, and far more educational than a crossword puzzle.

35. We do need reciprocity of course—but we need uniformity more, because if we had uniformity, we wouldn't need reciprocity—we would have it!

AUTOMOTIVE SAFETY EQUIPMENT REQUI

(AS SPECIFICALLY MENTIONED IN ICC SAFETY RULES AND REGULATIONS, STATE MOTOR

REQUIRED

| Jurisdictions exercising control over use of equipment listed. | - - T - O B - E M - O - U - N - T - E - D O - N V - E - H - I - C - L - E - S - - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -T-O B-E C-A-R-R-I-E-D | | | | | | | | | | | | | | | | | | |

IPMENT REQUIRED OR PERMITTED

ID REGULATIONS, STATE MOTOR VEHICLE LAWS AND OFFICIAL RULINGS)

→ PERMITTED ←

| - - | | | | -T-O B-E C-A-R-R-I-E-D I-N V-E-H-I-C-L-E-S- | | | | | | | | | | | | | | -T-O B-E M-O-U-N-T-E-D O-N V-E-H-I-C-L-E- | | | | | | | | | | | | | |

(This chart should always be used in conjunction with the other chart which follows it and upon which is shown the various vehicles and combinations of vehicles upon or with which the various items of "automotive safety equipment" shown on this chart must or may be affixed or used.)

MUST BE APPROVED	BACK-UP LAMPS: NUMBER	BACK-UP LAMPS: COLOR	BACK-UP LAMPS: MUST BE APPROVED	Driving lamps permitted lit at one time.	Jurisdictions exercising control over use of equipment listed.
--	NS	NS	###	4	I.C.C.
N	NSM	----		NS	ALA.
Y	NSM	----		NS	ARIZ.
Y	1	NS	N	4	ARK.
Y	1	A/W	N	4	CALIF.
Y	1	NS	Y	4	COLO.
N	NSM	----		4	CONN.
Y	NSM	----		4	DEL.
N	NSM	----		2	D of C
--	NSM	----		NS	FLA.
--	NS	NS	N	NS	GA.
Y	NSM	----		2	IDA.
N	1	NS	N	4	ILL.
N	1	W	N	4	IND.
N	1	NS	N	4	IOWA
N	1	W	Y	4	KAN.
--	NSM	----		NS	KY.
ited	NSM	----		NS	LA.
--	NSM	----		NS	ME.
N	NSM	----		4	MD.
--	NSM	----		NS	MASS.
N	1	NS	N	NS	MICH.
Y	1	W	N	4	MINN.
N	1	NS	N	4	MISS.
N	1	NS	N	4	MO.
Y	NSM	----		NS	MONT.
--	NSM	----		NS	NEBR.
N	NSM	----		4	NEV.
ited	NSM	----		4	N. H.
Y	1	A/Ye/W	N	4	N. J.
Y	NSM	----		4	N. M.
---	NSM	----		NS	N. Y.
Y	NSM	----		NS	N. C.
Y	NSM	----		2	N. D.
N	NS	NS	N	NS	OHIO
--	NSM	----		NS	OKLA.
Y	1	NS	N	4	ORE.
N	1	NS	N	4	PENN.
--	NSM	----		NS	R. I.
N	1	NS	N	4	S. C.
N	NSM	----		NS	S. D.
--	NSM	----		4	TENN.
--	NSM	----		NS	TEX.
N	1	NS	N	NS	UTAH
Y	NSM	----		NS	VT.
Y	1	W	Y	4	VA.
N	1	W	N	4	WASH.
--	NS	NS	N	NS	W.VA.
Y	NSM	----		4	WISC.
Y	NSM	----		NS	WYOM.

FOOTNOTES

EXPLANATION OF I.C.C. REFERENCES

\# - The I.C.C. Motor Carrier Safety Regulations apply to "Automotive Safety Equipment" on vehicles operated by common and contract carriers ("for hire" carriers) of persons or property and by private carriers of property, when operated regularly in interstate or foreign commerce, except when operated wholly within a municipality, between contiguous municipalities, or within a zone adjacent to and commercially a part of any such municipality or municipalities. When vehicles of common, contract or private carriers are transporting explosives or other dangerous articles the last-mentioned exception does not apply.

(For the duration of the war, the Commission's Safety Regulations also apply to all vehicles of common, contract or private carriers transporting explosives and other dangerous articles in intrastate commerce, except those transporting liquefied petroleum gases in containers other than cargo tanks and except those transporting inflammable liquids.)

References in these charts to vehicles covered by I.C.C. Safety Regulations, refer only to vehicles operated as above explained.

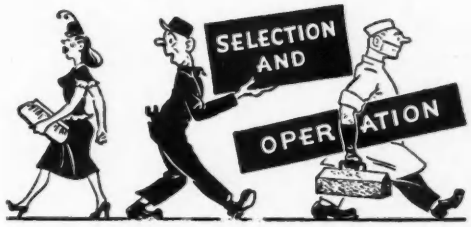
\## - Requires "a device or other means of preventing or removing ice or frost" from windshield.

\### - I.C.C. neither approves nor disapproves any individual required item. Its Motor Carrier Safety Regulations, however, set forth certain constructional details or performance standards to which certain items must conform. Reference should be made to the Motor Carrier Safety Rules for complete details.

COLOR AND REQUIREMENT SYMBOLS

A - Amber
G - Green
R - Red
N - No
NP - Not Permitted
NR - Not Required
NS - Not Specified

NSM - Not Specifically Mentioned
Y - Yes
Ye - Yellow
W - White
/ - When used between two letters or numbers means "or". Example - 2/4 means "2 or 4"



GENERAL FOOTNOTES

a - Prohibits red light visible from in front of vehicle.
b - Prohibits red or green light visible from in front of vehicle.
c - Tail lamp or separate lamp shall illuminate rear license plate with white light.
d - Must be located and constructed so as to illuminate rear license plate with white light.
e - May be incorporated in tail lamp.
f - Semaphores required on school buses.
g - One or both may be incorporated in tail lamp or lamps.
h - Number plate must be illuminated with white light.
i - Also two yellow reflectors on front of T^{c} and B^{ca}.
j - Also one amber reflector on front of vehicle.
k - One may be part of tail lamp.
L - Combination tail-stop lamp required on cabin trailers.
m - Reflectors may be substituted.
n - Liquid-burning, electric or reflector flares permitted interchangeably.
o - Clearance and marker lamps may be in combination.
p - Where green originally used, may be continued till replacements are necessary.
r - Yellow or orange flags required.
s - On vehicles over 45 feet long, rear clearance and marker lamps shall be in combination.
t - One green marker lamp every 10 feet on combinations over 33 feet long.
u - Reflectors required on front and/or rear of vehicle.
v - Rear clearance lamps may be red. May also be green on vehicles used prior to January 1, 1940.
w - Both lamps must show white to front and red to rear.
x - Step lamps required on all buses.
y - Trailer and semi-trailers shall have one lamp on front visible from both sides.
aa - Every vehicle 72" or more wide must have 2 amber or clear front, and 2 amber, clear or red rear reflectors. Clearance lamps may be substituted. Reflectors must be approved. Clearance lamps need not be approved.
cc - Vehicles manufactured after January 1, 1943 shall have double wipers.
dd - On interstate buses - green lights adjacent to destination sign or near upper corners;
On intrastate buses - purple lights in same locations.
ee - Double wipers required on all school buses.
ff - Two yellow stop lamps required on all buses.
ii - Clearance and marker lamps may be in combination. When in combination there must be one such lamp on each side, midway of vehicle.

XX - Fog lamps are included within the term "Auxiliary Driving Lamps" and are treated accordingly.

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SAFETY EQUIPMENT

See following pages for Vehicles and Locations on or in which Safety Equipment is used

VEHICLES AND LOCATIONS ON C

REQUIRED

Jurisdictions exercising control over use of safety equipment.	HEAD LAMPS		TAIL LAMPS		STOP LAMPS		REAR REFLECTORS		CLEARANCE LAMPS		SIDE MARKER LAMPS		IDENTIFICATION LAMPS		DIRECTION SIGNALS		SIDE REFLECTORS	
	Vehicles on Which Required	Location	Vehicles on Which Required	Location	Vehicles on Which Required	Location	Vehicles on Which Required	Location	Vehicles on Which Required	Location	Vehicles on Which Required	Location	Vehicles on Which Required	Location	Vehicles on Which Required	Location	Vehicles on Which Required	Location
I.C.C.	B-Tk Tra	F-eS	B-Tk-Tra T-St-Pt	Re[jj]	B-Tk-Tra T-St[fdz]	Re	B-Tk-T-St-Pt	jj Re-eS	2-Tra-Pt[28] 4-B-Tk[e] T-St[r]	F-eS F&Re eS	2-Pt 28 4-B-Tk[e] T-St[r]	eS eS-F&Re	NR----------		NR----------		2-Pt 4-B-Tk[e] T-St[r]	eS-F&R
ALA.	EMV[2]	F-eS	EMV-VET	Re	3	Re	NR----------		EMV[2 e]	LeS-F&Re	NR----------		NR----------		3	NS	NR----------	
ARIZ.	EMV[2]	F-eS	EMV-VET	Re	3	Re	NR----------		EMV[2 e]	LeS-F&Re	NR----------		NR----------		3	F&Re eS	NR----------	
ARK.	EMV[1]	F-eS	EMV-VET	Re	3	Re	EMV 33-T-St-CMV	Re	EMV[e]	LeS-F&Re	EMV-[e] Comb.	eS-F&Re	EMV[e h]	F&Re TC	3	F&Re eS	NR----------	
CALIF.	EMV[1]	F-eS[kk]	EMV-VET	Re	3	Re	1-CMV 2 - 34	Re-eS	EV[e]	F&Re eS	NR----------		NR----------		3	F&Re eS	NR----------	
COLO.	EMV[1]	F-eS	EMV-VET	Re	EMV	Re	EMV-VET	Re-eS	EV[e]	F&Re eS	EV[e]	eS-F&Re	NR----------		3	F&Re eS	EV[e]	eS F&
CONN.	EMV[1]	F-eS	EMV	Re	CMV[21]	Re	1-EV[c] 2-EV[d]	Re Re-eS	EV[d]	F&Re eS	NR----------		See first page		3	F&Re eS	NR----------	
DEL.	EMV[2]	F-eS	EMV-VET	Re[ff]	NR----------		EV[e]	Re	EV[e]	F&Re eS	See first page		NR----------		3	F&Re eS	NR----------	
D of C	EMV[1]	F-eS	EMV-VET	Re	NR----------		CMV-T-St B-5	ee Re-eS	Same as I.C.C.		Same as I.C.C.		NR----------		3	F&Re eS	Same as I.C.	
FLA.	EMV[1]	F-eS	EMV-T-St	Re	B-Tk-Tra T-St-Pt[m]	Re	Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		NR----------		NR----------		B-Tk[e] T-St[r]	eS F&
GA.	EMV Tra	Rt&Le S	EMV-Tra-T	Re[23]	MC	Re	Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		NR----------		NR----------		Same as I.C.	
IDA.	EMV[2]	F-eS	EMV-VET	Re	EMV	Re	Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		NR----------		3	F-eS	Same as I.C.	
ILL.	EMV	F-eS	EMV-T-St	Re	3	NS	B-Tk-Tra T-St	Re-LeS	Tk-Tra-T-St	eS	Tk-Tra-T-St	eS	B-Tk-Tra T-St[ex]	F&Re TC	3	NS	B-Tk-Tra T-St	S
IND.	EMV	F-eS	EMV-VET	Re	Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		NR----------		3	F&Re eS	Same as I.C.	
IOWA	EMV[1]	F-eS	EMV-VET	Re	EMV-SB[18]	LeS Re	1-EMV-T-St 2-Tk T-St[b]	Re-eS	2-Tra[e h] 4-Tk-T-St[r]	F-eS F-Re-eS	2-Tra-T-St 4-Tk[ehr]	eS-F eS-F-Re	Tk-Comb.[e h]	F&Re TC	NR----------		2-Tk[h] 4-Tk-T-St[r]	eS F&
KAN.	EMV[1]	F-eS	EMV-VET	Re	3	Re	EMV-T-St	Re	MC	LeS-F&Re	MC-Comb[6]	eS-F&Re	MC[e h]	F&Re TC	NR----------		NR----------	
KY.	EMV	F	EMV	Re	B-Tk-T-St	Re	NR----------		Same as I.C.C.		Same as I.C.C.		T	LeS	NR----------		Same as I.C.	
LA.	EMV[2]	F-eS	EMV-VET	Re	3	Re	NR----------		Tk-Comb[b]	LeS-F&Re	CMV[2]	Top Cab	NR----------		3	F&Re eS	NR----------	
ME.	EMV[1]	F-eS	EMV-VET	Re[23]	NR----------		EMV-T	Re	2-EMV[f] 3-EMV[fj]	F&Re-LeS[26]	NR----------		25	25	NR----------		NR----------	
MD.	EMV[1]	F-eS	EMV-VET	Re	3	Re	EMV-T-St	Re	EV[e]	F&Re LeS	EV[6]	eS-F&Re	NR----------		3	F &Re eS	See first page	
MASS.	EMV[1]	F-eS	EMV-VET	Re	NR----------		Tk[n]-Comb	Re	Tk-T[o]	LeS-F	NR----------		NR----------		NR----------		NR----------	
MICH.	EMV[2]	F-eS	EMV-VET	Re	B-Tk-Tra T-St	Re	Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		NR----------		NR----------		Same as I.C	
MINN.	EMV[1]	F-eS	EMV-VET	Re	3	Re	EMV-T-St	Re	EV[e]	F&Re eS	MC[hh]	eS-F&Re	NR----------		3	NS	NR----------	
MISS.	EMV[1]	F-eS	EMV-VET	Re	3	Re	EMV-T-St	Re[11]	MC-CMV	LeS-F&Re	MC-Comb[6]	eS-F&Re	MC-Comb[e h]	F&Re TC	3	F&Re eS	NR----------	
MO.	EMV	F-eS	EMV	Re	NR----------		Same as I.C.C.		NR----------		Same as I.C.C.		NR----------		NR----------		NR----------	
MONT.	EMV	F-eS	EMV	Re	NR----------		NR----------		EMV[e]	F&Re eS	NR----------		NR----------		NR----------		NR----------	
NEBR.	EMV[2]	F-eS	EMV	Re	NR----------		NR----------		EMV[e]	LeS-F&Re	NR----------		NR----------		NR----------		NR----------	
NEV.	EMV[1]	F-eS	EMV-VET	Re	Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		NR----------		NR----------		Same as I.C	
N. H.	EMV	F-eS	EMV-Tra-T-St	Re[23]	NR----------	Re[ix]	B-Tk-T-St	Re-eS[ix]	B-Tk-T-St[e]	F&Re-eS	i	eS-Re	NR----------		NR----------		B-Tk[r] T-St	eS
N. J.	EMV[1a]	F-eS	EMV-VET	Re[ff]	3	Re	1-EMV 2-CMV-B	Re Re-eS	NR----------		NR----------		NR----------		3	F&Re eS	NR----------	
N. M.	EMV[1]	F-eS	EMV-T-St	Re	MC	Re	1-EMV 2-MC-T-St	Re	Same as I.C.C.		EMV[c]	eS-F&Re	NR----------		3	F&Re eS	MC[e] T-St[r]	eS F&
N. Y.	EMV[2]	F-eS	EMV	Re	EV	Re	2-Tk[b] 5a 1- Others	Re-eS Re	NR----------		NR----------		NR----------		3	F&Re eS	NR----------	
N. C.	EMV[2]	F-eS	EMV-VET	Re	3	Re	VET	Re	EMV-Comb.[e]	F&Re eS	NR----------		NR----------		CMV	F&Re	NR----------	
N. D.	EMV[2]	F-eS	EMV-VET	Re	3	Re	NR----------		EMV[e]	LeS-F&Re	NR----------		NR----------		NR----------		NR----------	
OHIO	EMV[1]	F-eS	EMV-VET	Re	3	Re	EMV[20]	Re-eS	B-Tk-Tra T-St-Pt	F&Re eS	B-Tk-Tra T-St-Pt	eS-F&Re	NR----------		NR----------		Same as I.C	
OKLA.	EMV[1]	F	EMV	Re	EMV	Re	T-St-Pt[r]	Re	CV[b]	LeS-F&Re	CV[b]	eS-F&Re	NR----------		NR----------		CV	eS F&
ORE.	EMV	F-eS	EMV-T-St-Pt	Re	3 T-St[r]	Re	EMV[17]	Re-eS[jj]	2- (30) 4- (31)	F-eS F&Re-eS	2- (30) 4- (31)	eS-F eS-F&Re	NR----------		3	F&Re	Same as I.C	
PENN.	EMV[2]	F-eS	EMV-VET	Re	NR----------		B-CMV-T-St	Re[11]	EV[e]	LeS F&Re	CV-Comb[6]	eS-F&Re	NR----------		3 - 18	F&Re eS	NR----------	
R. I.	EMV[1]	NS	EMV-T-St	Re	NR----------		B-Tk-T-St	Re[23]	NR----------		NR----------		NR----------		3	F&Re eS	EV[e]	
S. C.	EMV[1]	F-eS	EMV	Re	3 MC	Re	EV-8b CV-8c	Re[11]	EV[e]	F&Re eS	Same as I.C.C.		EV-Comb[e h]	F&Re TC	3	F&Re eS	Same as I.C.C.	F&
S. D.	EMV[2]	F-eS	EMV-VET	Re	3	Re	EMV-T-St	Re[hx]	MC	LeS-F&Re	NR----------		MC[e h]	F&Re TC	3	F&Re eS	NR----------	
TENN.	EMV[2]	F-eS	EMV-VET	Re	EMV	Re	EMV[2 e]	Re-eS	EMV[2 e]	F&Re eS	EMV[2 e]	eS-F&Re	NR----------		NR----------		EMV[2 e]	F
TEX.	EMV[1]	F	EMV	Re	NR----------		NR----------		EMV[2 b]	LeS-F&Re	NR----------		NR----------		NR----------		NR----------	
UTAH	EMV[1]	F-eS	EMV-VET	Re	3 Same as I.C.C.		EMV[17]	Re-eS	Same as I.C.C.		Same as I.C.C.		NR----------		3	F&Re eS	Same as I.C	
VT.	EMV[1]	NS	EMV	Re	3	Re	NR----------		EMV[e]	LeS	NR----------		NR----------		3	NS	NR----------	
VA.	EMV[2]	F-eS	EMV-VET	Re	3	Re	NR----------		EMV[fx]	F&Re eS[24]	NR----------		PSV	F	3	F&Re eS	NR----------	
WASH.	EMV[1]	F-eS	EMV-VET	Re	EMV	Re	EMV-T-St	Re[jj]	B-Tk-Tra T-St[e]	F&Re eS	NR----------		NR----------		3	F&Re eS	EMV-[r] Comb.	F
W.VA.	EMV Tra	F-eS	EMV-VET	Re	Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		T-St[h]	F LeS	NR----------		NR----------	
WISC.	EMV[1]	F	EMV	Re	Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		Same as I.C.C.		NR----------		NR----------		Same as I.	
WYOM.	EMV[2]	F-eS	EMV-VET	Re	3	Re	CMV-T-St	Re	EMV[2 b]	LeS F&Re	NR----------		NR----------		3	F&Re eS	NR----------	

ON OR IN WHICH SAFETY EQUIPMENT IS USED

RED → ← PERMIT

SIDE REFLECTORS		REAR VIEW MIRRORS		WIND-SHIELD WIPERS	DE-FROST-ERS	FIRE EXTIN-GUISH-ERS	LIQUID BURNING FLARES	ELECTRIC FLARES	REFLECTOR FLARES	FUSEES	RED CLOTH FLAGS	LITE OR FLAG ON PROJECT-ING LOAD	SIDE-COWL-FENDER		RUNNING-BOARD-COURTESY		AUXILIARY DRIVING LAMPS		
Vehicles on Which Required	Location	Vehicles on Which Required	Location	MUST BE USED WITH	MUST BE USED WITH	MUST BE USED WITH	MUST BE USED WITH	MUST BE USED WITH	MUST BE USED WITH	MUST BE USED WITH	MUST BE USED WITH	USED WITH PRO-JECTION OF -	Vehicles on Which Permitted	Location	Vehicles on Which Permitted	Location	Vehicles on Which Permitted	Location	Vehicles on Which Permitted
2-Pt 4-B-Tk [e] 4-St r	eS-Re eS-F&Re	B-Tk Tra	11	27	EMV [6]	B-Tk Tra	All busses, trucks and tractors. B (See General Footnote O)				Same as Flares	Any	NSM-		NSM-		NSM-		NSM-
NR-		7	8	NR	NR	NR	PC-Tk-CMV	NR	Same as Flares	Same as Flares	Same as Flares	4'	NSM-		NSM-		AMV	F [hh]	XX-
NR-		7	8	27	MC [6]	SB-MC	B-Tk-Tra [13]	13	14	15	Same as Flares	4'	NSM-		NSM-		AMV	[hh]	XX-
NR-		EMV	8	EMV	NR	19	Tk [13]	Tk [13]	Tk [14]	NR	NR	4'	AMV	NS	AMV	eS	AMV	F [cc]	XX-
NR-		7	8	27	NR	SB	Tk [P]-Tra	13	14	NR	NR	4'	AMV	NS	AMV	NS	AMV	F [gy]	AMV
EV [e]	eS-F&Re	7	8	EMV	NR	19	Tk-B-Tra-SB	13	14	15	Same as Flares	4'	AMV	NS	AMV	eS	AMV	[cc]	XX-
NR-		EMV	8-9	EMV	SB-PSV	MC-SB	B-Tk-Comb-PSV	Same as for liquid burning flares.		Same as Flares	NR	10	NSM-		NSM-		AMV	NS	XX-
NR-		EMV	11	EMV	NR	NR	Tk [e] 13	13	NP	NR	NR	4'	NSM-		NSM-		AMV	[cc]	AMV
Same as I.C.C.		[J-7] 2-B	11	EMV	NR	NR	NR	NR	NR	NR	NR	4'	NSM-		NSM-		AMV	[bb]	AMV
B-Tk [e] T-St r	eS-F&Re	7	8	27	NR	NR	B-Tk-Tra	13	NR	15	Same as Flares	4'	NSM-		NSM-		NSM-		NSM-
Same as I.C.C.		B-Tk-Tra	11	27	EMV [6]	B-Tk-Tra	Same as I.C.C.	Same as I.C.C.	Same as I.C.C.	Same as I.C.C.	Same as Flares	Any	NSM-		NSM-		NSM-		NSM-
Same as I.C.C.		EV	8	EMV	[S] NR	NR	B-Tk-Tra [13]	13	14	NR	NR	4'	NSM-		NSM-		AMV	[hh]	XX-
B-Tk-Tra [S] T-St	12	EMV	8	27	NR	19	B-Tk-Tra	13	14	NR	NR	4'	AMV	NS	AMV	eS	AMV	[cc]	XX-
Same as I.C.C.		7	9	EMV	NR	Same as ICC&SB	Same as I.C.C.	Same as I.C.C.	NR	Same as I.C.C.	Same as Flares	Any	AMV	NS	AMV	NS	AMV	[cc]	XX-
B-Tk [P] A-Tk-T-St [r]	eS-Re F&Re	E MV	8	27	NR	19	Tk-Tra Comb [13]	13	14	15	Same as Flares	4'	AMV	NS	AMV	eS	AMV	[cc]	XX-
NR-		7	8	EMV	SB	19	Tk 13	13	14	Tk 16	Same as Flares	4'	AMV	NS	AMV	NS	AMV	F [cc]	XX-
Same as I.C.C.		CMV	11	Same as I.C.C.	Same as I.C.C.	Same as I.C.C.	Same as I.C.C.	Same as I.C.C.	Same as I.C.C.	Same as I.C.C.	Same as Flares	5'	NSM-		NSM-		NSM-		NSM-
NR-		7	8	NR	NR	B	Tk-B	Tk-B	NSM	NR	Same as Flares	Any	NSM-		NSM-		AMV	[hh]	XX-
NR-		MC-?	8a	MC	MC	MC	MC [13]	13	NSM	NR	Same as Flares	5'	NSM-		NSM-		NSM-		NSM-
See first page		EMV	11	27	SB	SB-19	EV [29] 13	13	14	NR	NR	4'	NSM-		NSM-		AMV	NS	XX-
NR-		7	11	27	NR	B [4]	CMV [s]	CMV [s]	NP	NR-	NR	NR	NSM-		NSM-		NSM-		NSM-
Same as I.C.C.		7	11	27	NR	MC-SB	MC 13	13	14	15	Same as Flares	4'	NSM-		NSM-		AMV	[hh]	XX-
NR-		7	8	27	NR	19	B-Tk-Tra [13]	13	14	NR	Same as Flares	4'	AMV	F-eS	AMV	eS	AMV	F-eS [cc]	XX-
NR-		7	8	EMV	NR	19	B-Tk 13	13	NSM	15	Same as Flares	4'	AMV	NS	AMV	NS	AMV	[cc]	XX-
NR-		7	8	27	6	NR	B-Tk-Tra	13	NSM	NR	Same as Flares	Any	AMV	NS	AMV	eS	AMV	NS	XX-
NR-		EMV	8	NR	NR	NR	Same as I.C.C.	Same as I.C.C.	NSM	NR	Same as Flares	4'	AMV	NS	NSM-		AMV	[hh]	XX-
NR-		7	8	27	NR	NR	B-Tk-32	NR	NSM	NR	NR	3'	NSM-		NSM-		NSM-		NSM-
Same as [JJ] I.C.C.		Tk [7]	11	MC	MC	MC	MC 13	13	NSM	MC [15]	Same as Flares	Any	NSM-		NSM-		AMV	F [cc]	XX-
B-Tk r T-St	eS ix F&Re	7	11	PC	PC	PC	B-Tk-Tra [13]	13	NSM	15	NR	NR	NSM-		B	[on step]	NSM-		AMV
NR-		7	8	27	NR	B - SB	CMV [b] [5b] [13]	13	NP	NR	NR	Any	AMV	NS	AMV	NS	AMV	[cc]	XX-
MC [e] T-St r	eS-F&Re	7	8	27	NR	B-Tk	B-Tk	B-Tk	NP	Same as Flares	Same as Flares	4'	NSM-		NSM-		AMV	[hh]	XX-
NR-		B-Tk	11	NR	NR	B [5b] 19	B [5b] Tk [P] Comb	Same as Flares	NP	NR	NR	4'	NSM-		NSM-		NSM-		NSM-
NR-		7	8	27	NR	19	Tk-Tra-T-St	Tk-Tra-T-St	Tk-Tra-T-St	Same as Flares	Same as Flares	4' [@]	NSM-		NSM-		AMV	NS	XX-
NR-		7	8	27	NR	MC	MC	MC	NSM	NR	Same as Flares	4'	NSM-		NSM-		AMV	[hh]	XX-
Same as I.C.C.		EMV	11	27	NR	19	B-Tk-Tra [13]	13	NP	15	Same as Flares	4'	AMV	NS	AMV	eS	AMV	F	AMV
CV	eS-F&Re	7	8	27	NR	19	CV 13	13	NSM	Same as Flares	Same as Flares	4'	NSM-		NSM-		NSM-		NSM-
Same as I.C.C.		EMV	8	27	NR	SB	B-Tk [13]	13	NP	NR	Same as Flares	4'	AMV	NS	AMV	eS	AMV	[aa]	XX-
NR-		7	8	EMV	NR	SB-HT-CMV 19	B-HT-CMV 13	13	14a	NR	Same as Flares	4'	AMV	NS	AMV	eS	AMV	F	AMV
EV [e]	LeS	B-Tk	11	SB	SB	SB	PSV-CMV k	PSV-CMV k	PSV-CMV k	NR	NR	4'	NSM-		NSM-		AMV	NS	XX-
Same as I.C.C.	eS JJ F&Re	SB Tk-Tra	11 LeS	SB-33 EMV [33]	27-6	19	Same as I. C. C.			15	Same as Flares	Any	AMV	NS	AMV	NS	AMV	[cc]	XX-
NR-		7	8	NR	NR	NR	Tk-Tra Comb. [13]	13	14	NR	NR	NSM	NSM-		NSM-		AMV	F [aa]	XX-
EMV [2 e]	eS-F&Re	Tk [7]	11	NR	NR	B-Tk-Tra	B-Tk-Tra [13]	13	NSM	15	Same as Flares	4'	NSM-		NSM-		AMV	F	XX-
NR-		CMV	11	NR	NR	NR	B-CMV-T-St- [32]	Same as Flares	Same as Flares	NR	NR	Any	NSM-		NSM-		NSM-		NSM-
Same as [JJ] I.C.C.		7	8	EMV	NR	19	B-Tk-Tra [13]	13	NP	15	Same as Flares	Any	AMV	NS	AMV	NS	AMV-	cc	XX-
NR-		Tk	11	EMV	NR	HT	16	16	NP	NR	Same as Flares	Any	NSM-		NSM-		AMV	NS	AMV
NR-		EMV	8	27	NR	NR	B-Tk .14	14	B-Tk 14	NR	Same as Flares	4'	AMV	NS	NSM-		AMV	NS	AMV
EMV-r Comb.	F&Re [h]	EMV	8	EMV	NR	19	Tk-CMV [13]	13	14	NR	NR	4'	AMV	NS	AMV	eS	AMV	F [cc]	XX-
NR-		B-Tk-Tra	8	27	EMV [6]	MC	MC	MC	MC	MC	Same as Flares	5'	NSM-		NSM-		NSM-		NSM-
Same as I.C.C.		EMV	11	27	NR	NR	Same as I.C.C.	Same as I.C.C.	Same as I.C.C.	Same as I.C.C.	Same as Flares	4'	NSM-		NSM-		AMV	NS	AMV
NR-		7	8	27	NR	NR	B-Tk-Comb. [13]	13	14	NR	NR	NR	NSM-		NSM-		AMV	[hh]	XX-

T IS USED

(This chart should always be used in conjunction with the other chart which precedes it and upon which is shown the various items of "automotive safety equipment" which must or may be used with or on the vehicles indicated on this chart.)

PERMITTED →

	RUNNING-BOARD-COURTESY		AUXILIARY DRIVING LAMPS		FOG LAMPS		SPOT LAMPS		BACK-UP LAMPS		
	Vehicles on Which Permitted	Location	Vehicles on Which Permitted	Location	Vehicles on Which Permitted	Location	Vehicles on Which Permitted	Location	Vehicles on Which Permitted	Location	Jurisdictions exercising control over use of safety equipment.
	NSM-	-----	NSM-	----	NSM-	-----	NSM-	----	EMV	Re	I.C.C.
	NSM-	-----	AMV	F hh	XX-	-----	AMV	NS	NSM-	-----	ALA.
	NSM-	-----	AMV	hh	XX-	-----	AMV	oo	NSM-	-----	ARIZ.
	AMV	eS	AMV	F cc	XX-	-----	AMV	NS	AMV	NS	ARK.
	AMV	NS	AMV	F gy	AMV	F gg	AMV	nn	AMV	NS	CALIF.
	AMV	eS	AMV	cc	XX-	-----	AMV	NS	AMV	NS	COLO.
	NSM-	-----	AMV	NS	XX-	-----	AMV	NS	NSM-	-----	CONN.
	NSM-	-----	AMV	cc	AMV	cc	AMV 22	NS	NSM-	-----	DEL.
	NSM-	-----	AMV	bb	AMV	bb	AMV 22	NS	NSM-	-----	D of C
	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	FLA.
	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	AMV	NS	GA.
	NSM-	-----	AMV	hh	XX-	-----	AMV	NS	NSM-	-----	IDA.
	AMV	eS	AMV	cc	XX-	-----	AMV	NS	AMV	NS	ILL.
	AMV	NS	AMV	cc	XX-	-----	AMV	NS	AMV	NS	IND.
	AMV	eS	AMV	cc	XX-	-----	AMV	NS	AMV	NS	IOWA
	AMV	NS	AMV	F cc	XX-	-----	AMV	NS	AMV	Re	KAN.
	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	KY.
	NSM-	-----	AMV	hh	XX-	-----	MP-	-----	NSM-	-----	LA.
	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	ME.
	NSM-	-----	AMV	NS	XX-	-----	AMV	NS	NSM-	-----	MD.
	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	MASS.
	NSM-	-----	AMV	hh	XX-	-----	AMV	NS	AMV	NS	MICH.
	AMV	eS	AMV	F-eS cc	XX-	-----	AMV	NS	AMV	NS	MINN.
	AMV	NS	AMV	cc	XX-	-----	AMV	NS	AMV	NS	MISS.
	AMV	eS	AMV	NS	XX-	-----	AMV	NS	AMV	Re	MO.
	NSM-	-----	AMV	hh	XX-	-----	AMV	NS	NSM-	-----	MONT.
	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	NEBR.
	NSM-	-----	AMV	F cc	XX-	-----	AMV	NS	NSM-	-----	NEV.
	B	on step	NSM-	-----	AMV	cc	MP-	-----	NSM-	-----	N. H.
	AMV	NS	AMV	cc	XX-	-----	AMV	NS	AMV	Re	N. J.
	NSM-	-----	AMV	hh	XX-	-----	AMV	NS	NSM-	-----	N. M.
	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	N. Y.
	NSM-	-----	AMV	NS	XX-	-----	AMV	NS	NSM-	-----	N. C.
	NSM-	-----	AMV	hh	XX-	-----	AMV	NS	NSM-	-----	N. D.
	AMV	eS	AMV	F	AMV	F	AMV	NS	AMV	NS	OHIO
	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	OKLA.
	AMV	eS	AMV	aa	XX-	-----	AMV	NS	AMV	NS	ORE.
	AMV	eS	AMV	F	AMV	F	AMV	NS	AMV	NS	PENN.
	NSM-	-----	AMV	NS	XX-	-----	NSM-	-----	NSM-	-----	R. I.
	AMV	NS	AMV	cc	XX-	-----	AMV	NS	AMV	NS	S. C.
	NSM-	-----	AMV	F aa	XX-	-----	AMV	NS	NSM-	-----	S. D.
	NSM-	-----	AMV	F	XX-	-----	NSM-	-----	NSM-	-----	TENN.
	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	-----	TEX.
	AMV	NS	AMV-	cc	XX-	-----	AMV	NS	AMV	NS	UTAH
	NSM-	-----	AMV	NS	AMV	NS	AMV	NS	NSM-	-----	VT.
	NSM-	-----	AMV	NS	AMV	NS	AMV	NS	AMV	NS	VA.
	AMV	eS	AMV	F cc	XX-	-----	Ecv CV	hh pp	AMV	NS	WASH.
	NSM-	-----	NSM-	-----	NSM-	-----	NSM-	----	AMV	Re	W. VA.
	NSM-	-----	AMV	NS	AMV	ex	AMV	NS	NSM-	-----	WISC.
	NSM-	-----	AMV	hh	XX-	-----	AMV	NS	NSM-	-----	WYOM.

FOOTNOTES

VEHICLE DESIGNATIONS

AV - Any Vehicle
AMV - Any Motor Vehicle
B - Bus
C - Commercial
CV - Commercial Vehicle
CMV - Commercial Motor Vehicle
Comb - Combination of Vehicles
EV - Every Vehicle
EMV - Every Motor Vehicle
HT - House Trailer
MC - Motor Carrier
MV - Motor Vehicle
PC - Passenger Carrier
PrV - Private Vehicle
PS - Public Service
PSV - Public Service Vehicle
PT - Pole Trailer
SB - School Bus
T - Trailer
TC - Top Center
Tk - Truck
Tra - Tractor
St-- Semi-trailer
VET - Vehicle at end of train

a - 52" or more in width
b - 70" or more in width
c - Under 72" in width
d - 72" or more in width
e - 80" or more in width
f - 84" or more in width
g - Over 20' long
h - Over 30' long
i - Over 45' long
j - Over 8' in height
k - Over 2,000 lbs. capacity
m - Over 3,000 lbs. capacity
n - 2 tons capacity or over
o - 3 tons capacity or over
p - Over 4,000 lbs. net weight
r - Over 3,000 lbs. gross weight
s - Over 5,000 lbs. gross weight
t - Over 11,000 lbs. gross weight
ch - Over 72" wide or 30' long
fx - Over 7' wide or high
ex - Over 80" wide or 25' long
z - If stop lamp on drawing vehicle obscured

LOCATION SYMBOLS

F - Front
Re - Rear
S - Side
Le - Left
Rt - Right
eS - Each side
Re-eS - Rear-each side
F-eS - Front-each side
F-oS - Front-opposite sider

aa-Not less than 12" nor over 24" above ground
bb-Not less than 12" nor over 30" above ground
cc-Not less than 12" nor over 42" above ground
dd-Not less than 12" nor over 48" above ground
ee-Not less than 14" nor over 42" above ground
ff-Not less than 15" nor over 48" above ground
gg-Not less than 16" above ground
gx-Not less than 18" above ground
hh-Not less than 24" above ground
hx-Not less than 42" above ground
ii-Not less than 24" nor over 42" above ground
ix-Not less than 24" nor over 48" above ground
jj-Not less than 24" nor over 60" above ground
kk-Not less than 28" nor over 54" above ground
nn-Not less than 30" nor over 72" above ground
oo-Not less than 50" nor over 72" above ground
pp-Not less than 24" nor over 72" above ground

GENERAL FOOTNOTES

0 - Liquid burning flares are not permitted with inflammable liquids or inflammable compressed gases in cargo tanks. Otherwise liquid burning, electric or reflector flares may be used interchangeably. Fusees must be used with liquid burning flares.
1 - Other than motorcycles. 1a - Other than motorcycles and motor-drawn vehicles.
2 - Other than motorcycles, road rollers, road machinery and farm tractors.
3 - Any vehicle so constructed or loaded that hand and arm signals are not visible from both in front and from rear. 3a - Private passenger car no requirement.
4 - Operating in intrastate transportation.
5 - Carrying over 6 passengers. 5a - Over 7 passengers. 5b - Over 10 passengers.
6 - Whenever used where ice formation is probable.
7 - Any motor vehicle so constructed or loaded as to prevent driver from having a view of the highway to the rear of his vehicle.
8 - So as to provide a view 200' to the rear. 8a- So as to provide a view 50' to the rear. 8b- Built after 4/29/38. 8c - Operated after 4/29/38.
9 - When view to rear in regular mirror is obstructed, must have a side mirror.
10 - A red light or lantern is required on any load which projects beyond rear of vehicle.
11 - So as to provide view to rear.
12 - At approximately one-third points on each side.
13 - Vehicles carrying inflammables and explosives must carry electric flares. Either electric flares or liquid-burning flares must be used on all other vehicles with which flares are required.
14 - Reflector flares may be used in place of electric flares on any vehicle carrying inflammable liquids in cargo tanks in interstate or foreign commerce and vehicles transporting inflammable compressed gases in cargo tanks in interstate, foreign or intrastate commerce. 14a - Interchangeable with liquid burning or electric flares.
15 - Fusees must be used with same vehicles as and when liquid-burning flares are used. Open flames cannot be used with vehicles carrying explosives or inflammables.
16 - All vehicles carrying inflammable liquids and compressed inflammable gases must carry electric flares. All other trucks or combinations weighing over 1,500 lbs. must use liquid-burning flares.
17 - Other than truck-tractors.
18 - Two semaphores permitted on vehicles having no electrical system.
19 - Carrying inflammables or explosives.
20 - Other than a commercial tractor to which a trailer or semi-trailer is attached.
21 - Those that require direction signals. 22 - Cannot be used for driving purposes.
23 - To left of axis of vehicle. 24 - At top corners.
25 - All trailers and semi-trailers over 1,000 lbs. capacity. Where combination is over 30' long, one lamp on left side visible from both sides must be used.
26 - When 3 are used, front ones must be located at top and bottom.
27 - Every vehicle which has a windshield.
28 - One combination clearance and marker lamp required on rearmost support for load - each side. Must show red to rear and side and amber to front.
29 - Except passenger cars and commercial motor vehicles of over 8,500 lbs. capacity.
30 - Two (2) on all tractors and pole-trailers and on all trailers and semi-trailers of over 3,000 lbs. gross weight if narrower than tractor cab.
31 - On all buses and trucks of over 80" wide and on all trailers and semi-trailers of over 30' long and over 3,000 lbs. gross weight if wider than tractor cab.
32 - And on wreckers and tow cars. 33 - Except private passenger cars.
34 - EMV or VET subject to special speed restrictions.

Truck Specifications Table

OF CURRENT PRODUCTION MODELS

DATA SUPPLIED BY MANUFACTURERS AND TABULATED BY

COMMERCIAL CAR JOURNAL

Key to Definitions, References and Abbreviations

DEFINITIONS

MAKE AND MODEL
Only Domestic Truck Models are listed.

OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.e.—Cab-Over-Engine design.
(D)—Diesel-engine equipped.
(T)—Designed for tractor use only.
(C)—Converted Ford or Chevrolet Model.

(2) **International Harvester**—Specifications shown represent only the basic standard chassis units and standard chassis ratings in keeping with definitions established by Commercial Car Journal. Optional units not shown such as engines, clutches, transmissions, axles or axle ratios, brakes, wheels and tires, frames or frame reinforcements, optional wheelbases or any other units which make up part of the truck chassis and which International will furnish and approve from the factory as optional equipment can or will change either the ratings, chassis weight shown or performance of the truck as indicated by this list.

Also the company reserves the privileges of assigning special gross vehicle ratings for any chassis providing in the opinion of our engineering department, the type of service justifies the new rating without decreasing the safety factor designed into the truck.

(a)—Available with Eaton Two-Speed Axle designated KS Models.

(b) Current models will include, at additional cost, certain items not considered standard equipment. These items are included in the specifications and are listed below—Model K-3, oversize transmission; Model K-6, K-7 and K-6-F, oversize brakes; Model K-8, oversize engines and brakes; Model K-10, oversize engine, transmission and brakes; Model KR-11, oversize engine and transmission; Models K-8F and K-11-F, oversize engine and brakes.

KEY TO ABBREVIATIONS

MAKES—ALL

B—Bendix
BL—Brown-Lipe.
Bu or Bud—Buda.
BW—Bendix-Westinghouse
C—Chevrolet.
Cl or Cla—Clark.
Con—Continental.
Cum—Cummins-Diesel.
Eat—Eaton.
F—Ford.
Fu—Fuller.
H—Hotchkiss.
Her—Hercules.
L—Lockheed.
LH—Lockheed front, Wagner "hi-Tork" rear.
LW—Lockheed front, Wisconsin rear.
M—Midland.
N.P.—New Process.
O or Ow—Own.
Op or Opt—Optional.
Shu—Shuler.
Spi—Spicer
T or Tim—Timken.
Tw—Timken-Westinghouse
TW—Timken-Wisconsin.
WG—Warner Gear.
Wau—Waukesha.
W or Wis—Wisconsin.
Ws—Westinghouse.
WW—Westinghouse or Wagner

WHEELS DRIVEN

2F—Forward unit of Rear Axle Group.
2R—Rear Unit of Rear Axle Group.
4R—Forward and rear units of Rear Axle Group.
6—All wheels.

BRAKES—SERVICE

Location

4—Four Wheels, front and rear.
4r—Four Wheels, rear only.

Type

I—Internal.
X—External.

Operation

A—Air.
H—Hydraulic.
V—Vacuum.
Dp—Dual Primary

BRAKES—HAND

Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
6—Six wheels.
P—Back of Power Divider.
J—Jackshaft.
T—Transmission.
F—Driveshaft.

Type

D—Tru-Stop disk.
I—Internal.
M—Mechanical.
X—External.
PD—Two drums on rear of power divider.

BRAKE DRUMS

Material

a—Cast alloy iron.
A—American Car Foundry.
c—Cast iron.
Cl—Copper iron.
Co—Composite.
D—Dayton.
E—Ermalite.
G—Gunite.
N—Nickel iron.
S—Steel.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

FRAME

Type

C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and fishplate.
P—Channel reinforced with plate.
TL—Channel tapered front and rear reinforced with liner.
D—Drop Center
Tf—Tapered front.
A—Straight section sidemembers, lined with oak inserts.
Z—Reinforced (X) member frame, box type sections.

REAR AXLE

Final Drive and Type

B—Bevel.
CD—Chain Drive
F—Full-floating.
Hy—Hypoid.
d—Dual range axle.
2—Double Reduction.
S—Spiral bevel.
W—Worm.
¾—Three Quarters Floating.
½—Semi-Floating
T—Torque Tube

GEAR RATIOS

(**) Only one ratio.

Drive and Torque

H—Hotchkiss (springs).
R—Radius Rods.
L—Parallel Torque Rods
T—Torque Arm.

GOVERNOR STANDARD

Y—Yes.
N—No.



(Continued from Page 87)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number, Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Sp'ds	REAR AXLE: Make and Model	Gear and Type	Drive X Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	Available																														
1	CS200-SP		126	133	15000		7.00/20D	7.50/20	Wau 6BM	6–3½x4¼	263	5.9	180	78–2800	7–2½x10¼	N	WG T9	4	Tim 53440H	8F	H	** –6.67	Tim 32502H	L4IH			a	TX	Opt	10x3x¼	T
2	C-250-SP		105		18000		8.25/20D	8.25/20	Wau 6BZ	6–4x4¼	320	5.9	210	95–2500	7–2½x10¼	N	Fu 5A330	5	Tim 54411H	8F	R	6.83–7.4	Tim 32502H	L4IH	334	583	a	TX	Opt	10x3x¼	T
3	CS-250-SP		105		20000		8.25/20D	9.00/20	Wau 6BZ	6–4x4¼	320	5.9	210	95–2500	7–2½x10¼	N	Fu 5A330	5	Tim 54411H	8F	R	6.83–7.4	Tim 32502H	L4IH	334	583	a	TX	Opt	10x3x¼	T
4	CS-400-LSP		105		21500		9.00/20D	10.00/20	Wau 6BZ	6–4x4¼	320	5.9	210	95–2500	7–2½x10¼	N	Fu 5A330	5	Tim 56410H	8F	R	6.83–7.4	Tim 35000H	L4IH	334	583	a	TX	Opt	12x3x¼	T
5	CS-500-SP		105		22000		9.00/20D	10.00/20	Wau 6MZA	6–4¼x4¾	404	5.9	286	112–2500	7–2½x12½	Y	Fu 5F430	5	Tim 56410H	8F	R	6.83–7.4	Tim 35000H	L4IH	334	583	a	TX	Opt	12x3x¼	T
6	CS-550-SP		105		24000		9.00/20D	10.00/20	Wau 6MZA	6–4¼x4¾	404	5.9	286	112–2500	7–2½x12½	Y	Fu 5F430	5	Tim 58300H	8F	R	6.83–7.4	Tim 35000H	L4IH	380	660	a	TX	Opt	12x3x¼	T
7	CS-550-SPX		112		32000		10.00/20D	11.00/20	Wau 6MZA	6–4¼x4¾	404	5.9	286	112–2500	7–2½x12½	Y	Fu 5F430	5	Tim S200H	2F	R	** –7.84	Tim 26450H	L4IH	570	1051	a	TX	Opt	14x3x⅜	T
8	CS-600		Opt	Opt	36000		11.00/20	11.00/24	Wau 6SRKR	6–4½x5½	517	5.9	365	125–2300	7–2½x12½	Y	Fu 5F430	5	Tim S200PA	2F	R	** –7.84	Tim 27452TW	L4IH	722	1051	a	TX	Opt	14x3x⅜	T
9	CS-600-SP		Opt	Opt	40000		11.00/20	11.00/24	Wau 145GK	6–5¼x6	779	5.6	590	186–2000	7–3½x17¾	Y	Spl 7841▽	8	Tim S200PA	2F	R	6.42–7.84	Tim 27452TW	L4IH	722	1051	a	TD	Opt	14x3x⅜	T
10	(D)CS-600-SP.Opt.		Opt	Opt	40000		11.00/20	11.00/24	Cum HB600	6–4⅛x6	672	17.	510	150–1800	7–4½x16½	Y	Spl 7841▽	8	T SW3012PA	WF	R	** –6.16	Tim 27452TW	L4IH			A	TD	Opt	14x3x⅜	T
11	Chevrolet....DP	744	115	115	4600	2460	6.00/16S	15S	O-Thrift Mas.	6–3½x3¼	216	6.5	174	90–3300	4–2¾x5⅛	N	Own	3	Own	Hy‖	T	** –4.11	Own	O4IH	159	242	Co	2I	38¼	5¾x2¼x⅜	C
12	DR	833	125	125	5800	2675	15S	7.00/17S	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4–2¾x5⅛	N	Own	3	Own	HyF	H	** –4.57	Own	O4IH	178	272	Co	2I	48½	5⅜x2¾x⅜	C
13	DS	833	134	134	8800	3020	7.00/17S	7.00/18	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4–2¾x5⅛	N	Own	4	Own	HyF	H	** –5.14	Own	O4IH	243	371	Co	2I	57¾	7x2¾x⅜	C
14	PJ	952	134	134	♦13000	3350	7.00/20S	7.00/20	O-Thrift Mas.•	6–3½x3¾	216	6.5	174	90–3300	4–2¾x5⅛	N	Own	4	Own	HyF	H	5.43	Own	O4IH	330	478	Co	2I	57¾	7x2¾x⅜	C
15	PK	983	160	160	♦13000	3530	7.00/20S	7.00/20	O-Thrift Mas.•	6–3½x3¾	216	6.5	174	90–3300	4–2¾x5⅛	N	Own	4	Own	HyF	H	5.48	Own	O4IH	330	478	Co	2I	83¼	7x2¾x⅜	P
16	(School bus)..PL	1118	160	160	12000	3790	6.50/20D	7.00/20	O-Thrift Mas.•	6–3½x3¾	216	6.5	174	90–3300	4–2¾x5⅛	Y	Own	4	Own	HyF	H	5.43	Own	O4IH	330	478	Co	2I		7x2¾x⅜	P
17	PVS	1328	134	134	14000	4120	7.50/20D	7.50/20	O-Load Mas.	6–3⅞x3¾‖	235	6.6	192	93–3100	4–2¾x5⅛	Y	Own	4	Own	HyF	H	5.43	Own	O4IH	330	478	Co	2I	57¾	7x2¾x⅜	P
18	PWS	1346	160	160	14000	4285	7.50/20D	7.50/20	O-Load Mas.	6–3⅞x3¾‖	235	6.6	192	93–3100	4–2¾x5⅛	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	83¼	7x2¾x⅜	P
19	(c.o.e.)....PP	•1567	109	109	16000	•4340	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾‖	235	6.6	189	90–3100	4–2¾x5⅛	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	62½	7x2¾x⅜	P
20	(c.o.e.)....PR	•1605	132	132	16000	•4560	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾‖	235	6.6	189	90–3100	4–2¾x5⅛	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	86	7x2¾x⅜	P
21	(c.o.e.)....PS	•1625	158	158	16000	•4640	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾‖	235	6.6	192	93–3100	4–2¾x5⅛	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	111½	7x2¾x⅜	P
22	PV	1328	134	134	15000	4120	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾‖	235	6.6	192	93–3100	4–2¾x5⅛	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	57¾	7x2¾x⅜	P
23	PW	1346	160	160	15000	4285	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾‖	235	6.6	192	93–3100	4–2¾x5⅛	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	83¼	7x2¾x⅜	P
24	(School bus) .PX	1395	195	195	15000	4515	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾‖	235	6.6	192	93–3100	4–2¾x5⅛	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I		7⅛x2⅜x⅜	P
25	Corbitt■.....18BG		137	Opt	18000		9.00/20	10.00/20	Con M6330	6–4x4½	330	6.1	246	104–2800	7–2½x12	Y	Fu 5A33	5	TimH100DPH	HyF	H	** –5.29	Tim 32502H	L4IHV			a	TX	Var	8x3¼x¼	T
26	.....22BG		145	Opt	22000		10.00/20	10.00/22	Con B6371	6–4½x4½	371	6.0	280	100–2800	7–2½x13½	Y	Fu 5A43	5	Tim L100DPH	HyF	H	** –5.29	Tim 35000H	L4IHV			a	TX	Var	8x3¼x¼	T
27	.....25BG		148	Opt	25000		10.00/22	11.00/22	Con B6427	6–4½x4⅞	427	5.9	325	127–2600	7–2½x13½	Y	Fu 5A43	5	Tim Q100P	HyF	H	** –6.17	Tim 35100TW	Ws4IA			a	TX	Var	8½x3¼x⅝	T
28	(T).....18TG		137	137	18000		9.00/20	10.00/20	Con M6330	6–4x4¾	330	6.1	246	104–2800	7–2½x12	Y	Fu 5A33	5	Tim H100P	HyF	H	** –5.29	Tim 32502TW	Ws4IA			a	TX	Var	7⅞x3¼x⅝	T
29	(T).....22TG		145	145	22000		10.00/20	10.00/22	Con B6427	6–4½x4⅞	427	5.9	325	127–2600	7–2½x13½	Y	Fu 5A43	5	Tim L100P	HyF	H	** –5.29	Tim 35000 TW	Ws4IA			a	TX	60½	8x3¼x¼	T
30	(T).....25TG		148	148	25000		10.00/22	11.00/22	Con R6513	6–4½x5⅛	513	5.9	400	164–2600	7–3¼x14½	Y	Fu 5A620	5	Tim Q100P	HyF	H	** –6.17	Tim 35100TW	Ws4IA			a	2	60½	8¼x3¼x⅝	T
31	(T).....28TG		148	148	28000		10.00/22	11.00/24	Con R6602	6–4½x5⅝	602	5.9	460	183–2600	7–3¼x14½	Y	Fu 5A650	5	Tim S200P	HyF	H	** –6.42	Tim 26450W	Ws4IA			a	2	60½	8¼x3¼x⅝	T
32	(D) (T)....27TD		152	152	27000		10.00/22	11.00/24	Cum HB600	6–4⅛x6	672	17	500	150–1800	7–4½x16½	Y	Fu 5A920	5	Tim S200P	HyF	H	** –6.42	Tim 26450W	Ws4IA			a	2	60½	8¼x3¼x⅝	T
33	(D) (T)....28TD		155	155	28000		10.00/22	11.00/24	Cum NHB600	6–5¼x6	743	15	575	200–2100			Fu 5A920	5	Tim S200P	HyF	H	** –6.42	Tim 26450W	Ws4IA			a	2	60½	8¼x3¼x⅝	T
34	2-speed models																														
35	(T).....18TG		137	137	18000		9.00/20	10.00/20	Con M6330	6–4x4¾	330	6.1	246	104–2800	7–2½x12	Y	Fu 5A330	5	Tim H300P	dF	H	6.13–8.15	Tim 32502TW	Ws4IA			a	TX	60½	7⅞x3¼x⅝	T
36	(T).....22TG		145	145	22000		10.00/20	10.00/22	Con B6427	6–4½x4⅞	427	5.9	325	127–2600	7–2½x13½	Y	Fu 5A430	5	Tim L300P	dF	H	6.32–8.20	Tim 35000TW	Ws4IA			a	TX	60½	8x3¼x¼	T
37	(T).....25TG		148	148	25000		10.00/22	11.00/22	Con R6513	6–4½x5⅛	513	5.9	400	164–2600	7–3¼x13½	Y	Fu 5A620	5	Tim Q300P	dF	H	6.53–8.53	Tim 35100TW	Ws4IA			a	2	60½	8¼x3¼x⅝	T
38	(T).....28TG		148	148	28000		10.00/22	11.00/24	Con R6602	6–4½x5⅝	602	5.9	460	183–2600	7–3¼x13½	Y	Fu 5A650	5	Tim R300P	dF	H	4.92–6.42	Tim 26450W	Ws4IA			a	2	60½	8¼x3¼x⅝	T
39	(D) (T)....22TD		148	148	25000		10.00/22	11.00/22	Her DWXD	6–4¼x4¾	404	15	330	146–2600		Y	Fu 5A430	5	Tim L300P	dF	H	6.32–8.20	Tim 35000TW	Ws4IA			a	TX	60½	8x3¼x¼	T
40	(D) (T)....25TD		148	148	25000		10.00/22	11.00/22	Her DRXC	6–4⅝x5¼	529	14	380	147–2200	7–3½x13¾	Y	Fu 5A620	5	Tim Q300P	dF	H	6.53–8.53	Tim 35100TW	Ws4IA			a	2	60½	8¼x3¼x⅝	T
41	(D) (T)....27TD		152	152	27000		10.00/22	11.00/24	Cum HB600	6–4⅞x6	672	17	500	150–1800	7–4½x16½	Y	Fu 5A920	5	Tim R300P	dF	H	4.92–6.42	Tim 26450W	Ws4IA			a	2	60½	8¼x3¼x⅝	T
42	(D) (T)....28TD		155	155	28000		10.00/22	11.00/24	Cum NHB600	6–5¼x6	743	15	575	200–2100			Fu 5A920	5	Tim R300P	dF	H	4.92–6.42	Tim 26450W	Ws4IA			a	2	60½	8¼x3¼x⅝	T
43	Crosley.....B		80	....	1650		4.50/12	.....	Own CE7	4–2½x2¼	44	7.5	33	26–5200	5–‡		WG-ASI-T92	3	Spi	2F	..	** –5.17	Own	Haw M	64	72	C					
44	Diamond T....201		119	119	8000	2800	6.00/16	7.50/16S	Her CBQXLD	6–3⅞x4½	236	6.5	177	82–3000	7–2½x10⅛	N	WG T9	4	Cla R650	8F	H	4.5 –5.1	Cla F250	L4IH	210	....	A	TX	52	6x2¼x¼	T
45	306		127	150	11000	3350	6.00/17	7.50/20	Her CBQXLD	6–3⅞x4½	236	6.5	177	82–3000	7–2½x10⅛	N	WG T9	4	Cla R750	8F	H	5.1 –6.3	Cla F266	L4IH	253	....	A	TX	60	7½x3x¼	T
46	.....306H		127	150	12000	3750	7.00/20D	7.50/20	Her CBQXLD	6–3⅞x4½	236	6.5	177	82–3000	7–2½x10⅛	N	WG T9	4	Eat A34-1350	8F	H	Dual Rge.	Cla F266	L4IHV	279	....	A	TX	60	7½x3x¼	T
47	.....404HH		139	189	14700	4900	8.25/20D	8.25/20	Her CBJXE3	6–3½x4¼	245	6.5	175	87–2800	7–2½x10‖	Y	WG T9A	4	Eat A35-1350	8F	H	Dual Rge.	Cla F450	L4IHV	363	522	A	TX	60	8½x3⅓x¼	T
48	.....404SC		139	163	13000	4800	7.50/20D	7.50/20	Her CBJXE3	6–3½x4¼	245	6.5	175	87–2800	7–2½x10‖	Y	WG T9A	4	Cla R750	8F	H	** –6.3	Cla F452	L4IHV	283	....	A	TX	60	8½x3⅓x¼	T
49	.....404SCH		139	163	14700	4900	7.50/20D	8.25/20	Her CBJXE3	6–3½x4¼	245	6.5	175	87–2800	7–2½x10‖	Y	WG T9A	4	Eat A34-1350	8F	H	Dual Rge.	Cla F452	L4IHV	363	....	A	TX	60	8½x3⅓x¼	T
50	509		139	231	16200	5350	8.25/20D	9.00/20	Her CBJXC◆	6–3¾x4¼	282	6.5	207	99–2800	7–2½x10‖	Y	WG T9A	4	Eat A35-1350	8F	H	Dual Rge.	Cla F450	L4IHV	363	....	A	TX	60	8½x3⅓x¼	T
51	.....509H		139	163	16200	5350	8.25/20D	9.00/20	Her CBJXD◆	6–4x4¼	320	6.5	240	113–3000	7–2½x10‖	Y	Cla 205V	5	Eat A3-16500	8F	H	Dual Rge.	Cla F450	L4IHV	363	....	A	TX	60	8½x3⅓x¼	T
52	.....509C		106	175	14700	5050	8.25/20D	8.25/20	Her CBJXC◆	6–3¾x4¼	282	6.5	207	99–2800	7–2½x10‖	Y	WG T9A	4	Eat A35-1350	8F	H	Dual Rge.	Cla F452	L4IHV	363	....	A	TX	60	8½x3⅓x¼	T
53	.....509SC		139	201	18800	6300	9.00/20^	9.00/20^	Her CBJXD	6–4x4¼	320	6.5	240	113–3000	7–2½x10‖	Y	Cla 205V	5	Eat A36-18000	8F	H	Dual Rge.	Cla F450	L4IHV	481	....	A	TD	60	8½x3⅓x¼	T
54	.....614H		130	190	23000	8600	10.00/20D	10.00/20	Cont† T-6427	6–4⅛x4⅞	427	6.5	346	153–2600	7–2⅞x13½	Y	Cla 270V	5	Eat A2-18501	8F	R	Dual Rge	Tim 35100TW	Ws4IA	590	....	A	TD	60	10x3½x¾	T
55	703		130	190	28000	9000	10.00/20D	11.00/20	Con T-6427	6–4⅛x4⅞	427	6.5	346	153–2600	7–2⅞x13½	Y	Cla 270V	5	Tim R200P	2F	R	** –6.42	Tim 35100TW	Ws4IA	648	....	A	TD	90	10¼x3⅛x⅝	T
56	809		142	208	30000	11000	10.00/22D	11.00/20	Con R-6572	6–4½x5⅝	572	6.0	440	190–2600	7–3¼x14½	Y	Spi 6253–703	15	Tim U200P	2F	R	7.08–7.84	Tim 36021TW	Ws4IA	722	....	A	TD	90	10¼x3⅛x⅝	T
57	901		172	172	36000	12400	10.00/22D	10.00/22	Cum HB600	6–4⅛x6	672	17.	500	150–1800	7–4½x16¾	Y	Spi 7851, 703	15	Tim U200P	2F	R	** –7.08	Tim 36021TW	Ws4IA	722	....	A	TD	90	10¼x3⅛x⅝	T
58	Dodge.....WC		116	....	4600		6.00/16S	6.50/16S	Own T-112	6–3¼x4⅜	217	6.8	172	95–3600	4–2½x4.8	N	NP 36520	3	Own T112	HyS	H	3.73–4.78	Own T112	O4IH	174	264	Co	TX	40½	6⅞x2¼x⅜	C
59	.....WD-15		120	....	5200		TA-15S	TA-15S	Own T-112	6–3¼x4⅜	217	6.8	172	95–3600	4–2½x4.8	N	NP 36520	3	Own T114	HyS	H	3.73–4.78	Own T114	O4IH	183	276	Co	TX	44½	6⅞x2¼x⅜	C
60	.....WD-20		120	133	7000		6.50/16S▲	6.00/20	Own T-116	6–3¼x4⅝	230	6.7	184	102–3600	4–2½x4.8	N	NP 37520	3	Own T116	HyF	H	3.90–4.89	Own T116	O4IH	197	294	Co	TX	44½	6¼x2¼x⅜	C
61	.....WF-21		135	160	9500		6.00/20S‡	6.50/20	Own T-118	6–3⅞x4¼	236	6.6	192	109–3600	4–2½x5.0	N	NP 38750	4	Own T118	HyF	H	5.11–6.83	Own T118	O4IH	284	407	C	TX	60	7x2¾x.21	C
62	.....WF-31		135	200	13500		6.00/20S‡	7.50/20	Own T-118	6–3⅞x4¼	236	6.6	192	109–3600	4–2½x5.0	N	NP 38750	4	Own T118	HyF	H	5.11–6.83	Own T118	O4IH	284	407	C	TX	60	7x2¾x.21	C
63	.....WFA-31		135	200	14000		6.00/20S‡	8.25/20	Own T-118	6–3⅞x4¼	236	6.6	192	109–3600	4–2½x5.0	N	NP 38750	4	Eat A5-1350	SFd	H	Dual Rge.	Own T118	O4IH	284	407	C	TX	60	7x2¾x.21	C
64	(c.o.e.) .WFM-35		105	159	13500		6.00/20S‡	7.50/20	Own T-128	6–3⅞x4¼	236	6.6	192	109–3600	4–2½x5.0	N	NP 38780	4	Own T128	HyF	H	5.11–6.83	Own T128	O4IH	284	407	C	TX	60	7x2¾x⅜	C
65	(c.o.e.).WFMA-35		105	159	14000		6.00/20S‡	8.25/20	Own T-128	6–3⅞x4¼	236	6.6	192	109–3600	4–2½x5.0	N	NP 38780	4	Eat A5-1350	SFd	H	Dual Rge.	Own T128	O4IH	284	407	C	TX	60	7x2¾x⅜	C
66	.....WG-40		136	220	15500		6.00/20D	8.25/20	Own T-120	6–3⅞x4½	250	6.6	204	114–3600	4–2½x5.0	Y	NP 39240	5	Own T120	HyF	H	5.11–7.16	Own T120	O4IHV	359	503	C	TX	60½	8⅛x2⅜x⅜	C
67	.....WGA-40		136	220	15500		6.00/20D	8.25/20	Own T-120	6–3⅞x4½	250	6.6	204	114–3600	4–2½x5.0	Y	NP 39240	5	Eat A5-1350	SFd	H	Dual Rge.	Own T120	O4IHV	359	503	C	TX	60½	8⅛x2⅜x⅜	C
68	.....WGAX-40		136	220	14000		8.25/20D°	8.25/20°	Own T-120	6–3⅞x4½	250	6.6	204	114–3600	4–2½x5.0	Y	NP 39240	5	Own T130	HyF	H	5.11–7.16	Own T130	O4IHV	359	503	C	TX	60	8⅛x2⅜x⅜	C
69	(c.o.e.) .WGM-40		105	159	16000		6.00/20D	8.25/20	Own T-130	6–3⅞x4½	250	6	204	114–3600	4–2½x5.0	Y	NP 39290	5	Eat A5-1350	SFd	H	Dual Rge.	Own T130	O4IHV	359	503	C	TX	60	8⅛x2⅜x⅜	C
70	(coe) .WGMA-40		105	159	16000		8.25/20D°	8.25/20°	Own T-130	6–3⅞x4½	250	6	204	114–3600	4–2½x5.0	Y	NP 39290	5	Eat A6500	SFd	H	Dual Rge.	Own T130	O4IHV	391	609	C	TX	60	8⅛x2⅜x⅜	C
71	(coe) WGMAX-40		105	159	16500		8.25/20D°	8.25/20°	Own T-130	6–3⅞x4½	250	6	204	114–3600	4–2½x5.0	Y	NP 39290	5	Eat A6500	SFd	H	Dual Rge.	Own T130	O4IHV	391	609	C	TX	60	8⅛x2⅜x⅜	C
72	.....WH-45		136	220	15500		6.50/20D	8.25/20	Own T-120	6–3⅞x4½	250	6	204	114–3600	4–2½x5.0	Y	NP 39240	5	Own T120	HyF	H	5.11–7.16	Own T120	O4IHV	359	503	C	TX	60½	8⅛x2⅜x⅜	C
73	.....WHA-45		136	220	15500		6.50/20D	8.25/20	Own T-120	6–3⅞x4½	250	6	204	114–3600	4–2½x5.0	Y	NP 39240	5	Eat A5-1350	SFd	H	Dual Rge.	Own T120	O4IHV	359	503	C	TX	60½	8⅛x2⅜x⅜	C
74	.....WHAX-45		136	220	16000		8.25/20D°	8.25/20°	Own T-120	6–3⅞x4½	250	6	204	114–3600	4–2½x5.0	Y	NP 39240	5	Eat A6500	SFd	H	Dual Rge.	Own T120	O4IHV	391	609	C	TX	60	8⅛x2⅜x⅜	C
75	(c.o.e.),WHM-45		105	159	16000		6.50/20D	8.25/20	Own T-130	6–3⅞x4½	250	6	204	114–3600	4–2½x5.0	Y	NP 39290	5	Own T130	HyF	H	5.11–7.16	Own T130	O4IHV	359	503	C	TX	60	8⅛x2⅜x⅜	C

• Includes cab. † Or Continental T-6371. 6–4⅛x4½. °—Rear-9.00/20, 10 ply. □ Chevrolet own rear axle (6.17:1) available at extra cost on Models PJ-PK-PL. Chevrolet own 2-speed rear axle (6.13-8.10:1) available at extra cost on Models PVS-PWS-PP-PR-PS-PV-PW-PX. ♦ Max. gross vehicle weight can only be obtained by adding regular production options (at extra cost). ▽ With Spi 703A with 3 forward speeds.
‡ Front only; Rear 6.50/20S ◆ Or CBJXB 6-3½x4¼ ▲ Rear 7.00/168 ^ Front only; rear 10.00/20D • Own Loadmaster engine available on models PJ-PK-PL at extra cost
■ Sleeper cab models available in 25-27-28 Series with 25 inch longer wheelbase. ‡ Numbers 1 to 4—1.375x0.870; Number 5—1.500x1.498.

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Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	Forward Sp'ds	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimension (Min. Std. W. B.)	FRAME Side Rail Dimensions	Type
	Dodge Cont'd.																													
1	(coe) WHMA-45		105	159	16000		6.50/20D	8.25/20	Own T-130	6–3 1/8 x4 1/2	250	6.6	204	114–3600	4–2 1/2 x5.0	Y	NP 39290	5	Eat A5-1350	SFd	H	Dual Rge.	Own T130	O4IHV	359	503	C	TX	60	8 1/4 x2 3/4 x 1/4	C
2	(coe) WHMAX-45		105	159	16500		8.25/20D*	8.25/20*	Own T-130	6–3 1/8 x4 1/2	250	6.6	204	114–3600	4–2 1/2 x5.0	Y	NP 39290	5	Eat 16500	SFd	H	Dual Rge.	Own T130	O4IHV	391	609	C	TX	60	8 1/4 x2 3/4 x 1/4	C
3	WJ-55		136	235	18500		7.50/20D	9.00/20	Own T-136	6–3 3/4 x4 1/4	281	6.5	225	115–3200	7–3x11.2	Y	NP 39460	5	TimH100DPH	HyF	H	6.80–7.20	Tim T136	T4IHV	396	609	C	TX	60 1/2	8 1/4 x2 1/8 x 1/4	C
4	WJA-55		136	235	18500		7.50/20D	9.00/20	Own T-136	6–3 3/4 x4 1/4	281	6.5	225	115–3200	7–3x11.2	Y	NP 39460	5	TimH300DPH	HyF	H	Dual Rge.	Tim T136	T4IHV	396	609	C	TX	60 1/2	8 1/4 x2 1/8 x 1/4	C
5	WK-65		136	196	21000		8.25/20D	10.00/20	Own T-135	6–3 3/4 x5	331	6.5	270	128–3000	7–3x11.2	Y	NP 39440	5	Tim L100DPH	HyF	H	6.83–7.40	Ti 32500NX14	T4IHV	424	666	C	TX	60 1/2	8 1/4 x2 1/8 x 1/4	P
6	WKA-65		136	196	21000		8.25/20D	10.00/20	Own T-135	6–3 3/4 x5	331	6.5	270	128–3000	7–3x11.2	Y	NP 39440	5	Tim L300DPH	HyF	H	Dual Rge.	Ti 32500NX14	T4IHV	424	666	C	TX	60 1/2	8 1/4 x2 1/8 x 1/4	P
7	WR-65		136	196	23000		10.0/20D*	10.00/20*	Own T-135	6–3 3/4 x5	331	6.5	270	128–3000	7–3x11.2	Y	NP 39440	5	Tim 100DPH	HyF	H	6.83–7.80	Tim35020NX9	T4IHV	486	770	C	TX	60 1/2	8 1/4 x2 1/8 x 1/4	C
8	WRA-65		136	196	23000		10.0/20D*	10.00/20*	Own T-135	6–3 3/4 x5	331	6.5	270	128–3000	7–3x11.2	Y	NP 39440	5	Tim 300DPH	HyF	H	Dual Rge.	Tim35020NX9	T4IHV	486	770	C	TX	60 1/2	8 1/4 x2 1/8 x 1/4	C
	Dodge (School Bus)																													
9	WF-32-S		160	....	14500		6.50/20D	7.50/20	Own T-118	6–3 1/8 x4 1/4	236	6.6	192	109–3600	4–2 1/2 x5.0	N	NP 38750	4	Own T118	HyF	H	6.28–6.83	Own T118	O4IH	284	407	C	TX	.....	7x2 3/4 x.21	C
10	WF-34-S		178	....	14500		7.00/20D	7.50/20	Own T-118	6–3 1/8 x4 1/4	236	6.6	192	115–3200	4–2 1/2 x5.0	N	NP 38750	4	Own T118	HyF	H	6.28–6.83	Own T118	O4IHV	284	407	C	TX	.....	7 1/4 x2 3/4 x 1/4	C
11	WF-36-S		200	....	14500		7.50/20D	7.50/20	Own T-118	6–3 1/8 x4 1/4	236	6.6	192	115–3200	4–2 1/2 x5.0	N	NP 38750	4	Own T118	HyF	H	6.28–6.83	Own T118	O4IHV	284	407	C	TX	.....	7 1/4 x2 3/4 x 1/4	P
12	WH-49-S		220	....	16000		7.50/20D	8.25/20	Own T-120	6–3 1/4 x4 1/4	250	6.6	204	114–3600	4–2 1/2 x5.0	Y	NP 39240	5	Own T120	HyF	H	6.28–7.16	Own T120	O4IHV	359	503	C	TX	.....	8 1/4 x2 1/8 x 1/4	P
13	WJ-59-S		235	....	18500		9.00/20D	9.00/20	Own T-136	6–3 3/4 x4 1/4	282	6.5	225	115–3200	7–3x11.2	Y	NP 39460	5	TimH100DPH	HyF	H	6.8–7.2	Tim32525NX1	T4IHV	359	503	C	TX	.....	8 1/4 x2 1/8 x 1/4	P
14	Duplex . . . . . †. . . T		136	220	18000	6600	8.25/20	9.00/20	Her JXD	6–4x4 1/4	320	6.2	240	113–3000	7–2 1/8 x10 3/4	Y	Fu 5B330	5	Tim H100	B	H	** –6.83	Tim 32502	L4IHV	420	654	A	TX	59	9 1/2 x3 1/8 x 1/4	C
15	. . . . . R		136	220	25000	8820	9.00/20	10.00/20	Her WXLC-3	6–4 1/4 x4 3/4	404	5.8	312	139–2600	7–2 3/8 x13 3/4	Y	Fu 5A43	4	Tim 98415	DF	R	6.53–8.53	Tim 35000	L4IHV	730	1016	A	TX	79 1/4	9 1/4 x3 1/8 x 1/4	C
16	. . . . . JHA		148	220	28000	9800	10.00/20D	11.00/20	Her RXB	6–4 1/8 x5 1/4	501	5.4	360	121–2200	7–3x14	Y	Fu 5A620	5	Tim Q300	2F	R	** –9.81	Tim 26450	Ws4IA	912	1311	A	TX	79	10 1/2 x3 1/8 x 1/4	C
17	. . . . . KHA		148	220	32000	10500	11.00/20	11.00/20	Her RXC	6–4 1/8 x5 1/4	529	5.4	395	132–2300	7–3x14 1/2	Y	Fu 5A620	5	Tim U-200	2F	R	** –9.81	Tim 26450	Ws4IA	912	1311	A	TX	79	10 1/2 x3 1/8 x 1/4	C
18	Federal 16M		146	194	13500	4460	7.50/20D	. . . . .	Her JXE	6–3 1/2 x4 1/4	245	6.5	180	87–3000	7–2 1/2 x10 3/4	N	WG T9	4	T 53547DPH	BF	H	** –5.66	Tim 30000HX	L4IHV	310	482	a	TX	67	8 1/4 x2 7/8 x 1/4	T
19	. . . . . 18M		146	194	15000	4700	8.25/20D	. . . . .	Her JXBF	6–3 5/8 x4 1/4	263	6.5	189	93–3000	7–2 1/2 x10 3/4	N	WG T9	4	TimE100DPH	SF	H	** –6.20	Tim 30003H	LT4IHV	314	532	a	TX	67	8 1/4 x2 1/8 x 1/4	T
20	. . . . . 18M2		146	194	15000	4830	8.25/20D	. . . . .	Her JXBF	6–3 5/8 x4 1/4	263	6.5	189	93–3000	7–2 1/2 x10 3/4	N	WG T9	4	TimE300DPH	dF	H	6.13–8.10	Tim 30003H	LT4IHV	314	532	a	TX	67	8 1/4 x2 1/8 x 1/4	T
21	. . . . . 29M		146	194	20000	5500	9.00/20D	. . . . .	Her JXDF	6–4x4 1/4	320	6.5	246	102–2800	7–2 1/2 x10 3/4	N	Cla 205V	5	Tim L100DPH	SF	H	** –6.83	Tim 32514H	LT4IHV	390	654	a	TX	67	8 1/4 x2 1/8 x 1/4	T
22	. . . . . 29M2		146	194	20000	5690	9.00/20D	. . . . .	Her JXDF	6–4x4 1/4	320	6.5	246	102–2800	7–2 1/2 x10 3/4	N	Cla 205V	5	Tim L300DPH	dF	H	6.32–8.22	Tim 32514H	LT4IHV	390	654	a	TX	67	8 1/4 x2 1/8 x 1/4	T
23	. . . . . 29MA		155	194	20000	5950	9.00/20D	. . . . .	Her JXDF	6–4x4 1/4	320	6.5	246	102–2800	7–2 1/2 x10 3/4	N	Cla 205V†	15	Tim L100DPH	SF	H	** –6.83	Tim 32514H	LT4IHV	466	820	a	TD	76	8 1/4 x2 1/8 x 1/4	T
24	. . . . . 45M		143	203	24000	8005	10.00/22D	10.00/24	Con B6427	6–4 1/4 x4 1/4	427	6.4	332	133–2600	7–2 1/4 x13 3/4	Y	Cla 270VO	5	Tim Q100P	2F	R	** –6.83	Tim 35011TW	TW4IA	606	933	a	TD	60 1/2	10 1/2 x3 1/4 x 1/4	T
25	. . . . . 45M2		143	203	24000	8380	10.00/22D	10.00/24	Con B6427	6–4 1/4 x4 1/4	427	6.4	332	133–2600	7–2 1/4 x13 3/4	Y	Cla 270VO	5	Tim Q300P	dF	R	6.53–8.53	Tim 35011TW	TW4IA	606	933	a	TD	60 1/2	10 1/2 x3 1/4 x 1/4	T
26	. . . . . 55M		143	203	27000	8485	11.00/22D	11.00/24	Con B6427	6–4 1/4 x4 1/4	427	6.4	332	133–2600	7–2 1/4 x13 3/4	Y	Cla 270VO	5	Tim S-200P	2F	R	** –7.08	Tim 36021TW	TW4IA	722	1051	a	TD	60 1/2	10 1/2 x3 1/4 x 1/4	T
27	. . . . . 55MA		155	203	27000	8765	11.00/22D	11.00/24	Con B6427	6–4 1/4 x4 1/4	427	6.4	332	133–2600	7–2 1/4 x13 3/4	Y	Cla 270V†	15	Tim S-200P	2F	R	** –7.08	Tim 36021TW	TW4IA	722	1051	a	TD	72 1/2	10 1/2 x3 1/4 x 1/4	T
28	. . . . . 60MA		155	203	28000	9600	11.00/22D	11.00/24	Con 22R	6–4 1/2 x5 1/4	501	5.4	384	148–2400	7–2 3/4 x14 1/2	Y	Fu 5A65▲	15	Tim S200P	2F	R	** –7.08	Tim 36021TW	Tw4IA	722	1051	a	FX	72 1/2	10 1/2 x3 1/4 x 1/4	T
29	. . . . . 60M2		143	203	28000	9370	11.00/22D	11.00/24	Con 22R	6–4 1/2 x5 1/4	501	5.4	384	148–2400	7–2 3/4 x14 1/2	Y	Fu 5A650	5	Tim S300P	HyF	R	6.53–8.53	Tim 36021TW	Tw4IA	722	1051	a	TX	60 1/2	10 1/2 x3 1/4 x 1/4	T
30	. . . . . 65M2		141	201	30000	9995	11.00/22D	11.00/24	Con R6602	6–4 7/8 x5 3/4	602	6.1	464	200–2600	7–3 1/4 x14 1/2	Y	Fu 5A650	5	Tim S300P	HyF	R	6.53–8.53	Tim 36000TW	Ws4IA	722	1051	a	TX	60 1/2	10 1/2 x3 1/4 x 1/4	T
31	. . . . . 65MA		153	201	30000	10225	11.00/22D	11.00/24	Con R6602	6–4 7/8 x5 3/4	602	6.1	464	200–2600	7–3 1/4 x14 1/2	Y	Fu 5A65▲	15	Tim S200P	HyF	R	** –7.08	Tim 36000TW	Ws4IA	722	1051	a	TX	72 1/2	10 1/2 x3 1/4 x 1/4	T
	Ford																													
	Light Duty																													
32	Chs. Cowl. . 79C	♦826	114	114	4700	$2276	6.50/16S	6.50/16S	Own 59C	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 21C	3	Own 21C	S¾	H	** –3.78	Own 21C	O4IH	162	264	Co	21	40.06	5.92x2 1/2 x.15	T
33	Chs. Cowl. . 7GC	♦768	114	114	4700	$2276	6.50/16S	6.50/16S	Own 5GC	6–3.3x4.4	226	6.7	180	90–3300	4–2 1/2 x4.88	N	Own 2GC	3	Own 21C	S¾	H	** –3.78	Own 21C	O4IH	162	264	Co	21	40.06	5.92x2 1/2 x.15	T
34	Chs. Cowl. . 79Y	♦1002	122	122	6600	$2776	7.50/17S▽	7.50/17S▽	Own 59Y	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41Y	4	Own 21Y	SF	H	** –4.85	Own 21Y	O4IH	187	308	Co	21	48.06	6x2 1/4 x.19	T
35	Chs. Cowl. . 7GY	♦944	122	122	6600	$2776	7.50/17S▽	7.50/17S▽	Own 5GY	6–3.3x4.4	226	6.7	180	90–3300	4–2 1/2 x4.88	N	Own 51Y	4	Own 21Y	SF	H	** –4.85	Own 21Y	O4IH	187	308	Co	21	48.06	6x2 1/4 x.19	T
	Heavy Duty Dump																													
36	Chs. Cowl. . 79U	♦1180	134	134	12500	$3911	7.50/20D	7.50/20	Own 59T	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 01T	SF	H	** –6.66	Own 01T	O4IH	303	506	Co	TX	60.06	7x2 3/4 x.21	LT
37	Chs. Cowl. . 7GU	♦1122	134	134	12500	$3911	7.50/20D	7.50/20	Own 5GT	6–3.3x4.4	226	6.7	180	90–3300	4–2 1/2 x4.88	N	Own 4GT	4	Own 01T	SF	H	** –6.66	Own 01T	O4IH	303	506	Co	TX	60.06	7x2 3/4 x.21	LT
	Heavy Duty Truck																													
38	Chs. Cowl. . 79T	♦1174	134	134	12500	$3906	7.50/20D	7.50/20	Own 59T	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 01T	SF	H	** –6.66	Own 01T	O4IH	303	506	Co	TX	60.06	7x2 3/4 x.21	LT
39	Chs. Cowl. . 7GT	♦1116	134	134	12500	$3906	7.50/20D	7.50/20	Own 5GT	6–3.3x4.4	226	6.7	180	90–3300	4–2 1/2 x4.88	N	Own 4GT	4	Own 01T	SF	H	** –6.66	Own 01T	O4IH	303	506	Co	TX	60.06	7x2 3/4 x.21	LT
40	Chs. Cowl. . 798T	♦1210	158	158	12500	$3986	7.50/20D	7.50/20	Own 59T	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 01T	SF	H	** –6.66	Own 01T	O4IH	303	506	Co	TX	84.06	7x2 3/4 x.21	LT
41	Chs. Cowl. 7G8T	♦1152	158	158	12500	$3986	7.50/20D	7.50/20	Own 5GT	6–3.3x4.4	226	6.7	180	90–3300	4–2 1/2 x4.88	N	Own 4GT	4	Own 01T	SF	H	** –6.66	Own 01T	O4IH	303	506	Co	TX	84.06	7x2 3/4 x.21	LT
	Heavy Duty COE																													
42	Cab Chs. . . 791W	♦1491	101	101	13500	$4333	7.50/20D	7.50/20	Own 59W	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 01T	SF	H	** –6.66	Own 01W	O4IH	303	506	Co	TX	60.06	7x2 3/4 x.21	T
43	Cab Chs. . . . 79W	♦1535	134	134	13500	$4468	7.50/20D	7.50/20	Own 59W	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 01T	SF	H	** –6.66	Own 01W]	O4IH	303	506	Co	TX	93.06	7x2 3/4 x.21	LT
44	Cab Chs. . 798W	♦1571	158	158	13500	$4543	7.50/20	7.50/20	Own 59W	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 01T	SF	H	** –6.66	Own 01W	O4IH	303	506	Co	TX	117.1	7x2 3/4 x.21	LT
	Heavy Duty Dump																													
45	Chs. Cowl. 79UH	♦1467	134	134	14500	$4076	8.25/20^D	8.25/20^	Own 59T	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 59T-M■	SFD	H	5.83–8.11	Own 01T	O4IHV	303	506	Co	TX	60.06	7x2 3/4 x.21	LT
46	Cha.Cowl. 7GUH	♦1409	134	134	14500	$4076	8.25/20^D	8.25/20^	Own 5GT	6–3.3x4.4	226	6.7	180	90–3300	4–2 1/2 x4.88	N	Own 4GT	4	Own 59T-M■	SFD	H	5.83–8.11	Own 01T	O4IHV	303	506	Co	TX	60.06	7x2 3/4 x.21	LT
	Heavy Duty Truck																													
47	Chs. Cowl. 79TH	♦1462	134	134	14500	$4071	8.25/20^D	8.25/20^	Own 59T	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 59T-M■	SFD	H	5.83–8.11	Own 01T	O4IHV	303	506	Co	TX	60.06	7x2 3/4 x.21	LT
48	Chs.Cowl. 7GTH	♦1404	134	134	14500	$4071	8.25/20^D	8.25/20^	Own 5GT	6–3.3x4.4	226	6.7	180	90–3300	4–2 1/2 x4.88	N	Own 4GT	4	Own 59T-M■	SFD	H	5.83–8.11	Own 01T	O4IHV	303	506	Co	TX	60.06	7x2 3/4 x.21	LT
49	Chs.Cowl. 798TH	♦1498	158	158	14500	$4151	8.25/20^D	8.25/20^	Own 59T	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 59T-M■	SFD	H	5.83–8.11	Own 01T	O4IHV	303	506	Co	TX	84.06	7x2 3/4 x.21	LT
50	Chs.Cowl. 7G8TH	♦1440	158	158	14500	$4151	8.25/20^D	8.25/20^	Own 5GT	6–3.3x4.4	226	6.7	180	90–3300	4–2 1/2 x4.88	N	Own 4GT	4	Own 59T-M■	SFD	H	5.83–8.11	Own 01T	O4IHV	303	506	Co	TX	84.06	7x2 3/4 x.21	LT
	Heavy Duty COE																													
51	Cab Chs. 791WH	♦1779	101	101	15000	$4498	8.25/20^D	8.25/20^	Own 59W	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 59T-M■	SFD	H	5.83–8.11	Own 01W	O4IHV	303	506	Co	TX	60.06	7x2 3/4 x.21	T
52	Cab Chs. . 79WH	♦1823	134	134	15000	$4633	8.25/20^D	8.25/20^	Own 59W	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 59T-M■	SFD	H	5.83–8.11	Own 01W	O4IHV	303	506	Co	TX	93.06	7x2 3/4 x.21	LT
53	Cab Chs. 798WH	♦1859	158	158	15000	$4708	8.25/20^D	8.25/20^	Own 59W	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 59T-M■	SFD	H	5.83–8.11	Own 01W	O4IHV	303	506	Co	TX	117.1	7x2 3/4 x.21	LT
	School Bus																													
54	Cowl Chs.,. 798T	♦1260	158	158	13500	$3970	7.50/20D	7.50/20	Own 59T	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 01T	SF	H	** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	7x2 3/4 x.21	T
55	Cowl Chs. . 7G8T	♦1202	158	158	13500	$3970	7.50/20D	7.50/20	Own 5GT	6–3.3x4.4	226	6.7	180	90–3300	4–2 1/2 x4.88	N	Own 4GT	4	Own 01T	SF	H	** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	7x2 3/4 x.21	LT
56	Cowl Chs.,. 794T	♦1353	194	194	14500	$4140	7.50/20D	7.50/20	Own 59T	8–3 1/8 x3 3/4	239	6.7	180	100–3800	3–2 1/2 x4.96	N	Own 41T	4	Own 01T	SF	H	** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	7x2 3/4 x.21	LT
57	Cowl Chs. . 7G4T	♦1295	194	194	14500	$4140	7.50/20D	7.50/20	Own 5GT	6–3.3x4.4	226	6.7	180	90–3300	4–2 1/2 x4.88	N	Own 4GT	4	Own 01T	SF	H	** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	7x2 3/4 x.21	LT
58	Hudson (¼T. Pkp)		128	128	4810	.....	6.50/16-6	6.50/16-6	Own 58	6–3x5	212	6.5	168	102–4000	3– ▲▲	N	Own	3	Own	8½	H	** –4.55	Own	B4IH	141	242	C	2I	42½	7 1/4 x1 1/4 x 1/4	B
59	Intern'l (2) . . KB-1	800	113	125	4400	2190	6.00/16-4	7.00/16	Own GRD214	6–3 1/8 x4 1/2	213	6.3	160	82–3400	4–2 5/8 x6 1/2	N	Own HDS-B	3	Own R1050	8½	H	3.72–5.11	Own F50	L4IH	164	316	c	FX	38	6x2 1/4 x 1/2	C
60	. . . . . KB-1M	755	102	113	4600	2090	6.00/16-4	6.50/16-6	Own GRD214	6–3 1/8 x4 1/2	213	6.3	160	82–3400	4–2 5/8 x6 1/2	N	O SA-HDS-B	3	Own R1050	8½	H	3.72–5.11	Own F150	L4IH	164	316	c	FX	.....	6 1/2 x2 1/4 x 1/2	C
61	. . . . . KB-2	840	125	125	5200	2225	6.00/16-4	7.00/16-6	Own GRD214	6–3 1/8 x4 1/2	213	6.3	160	82–3400	4–2 5/8 x6 1/2	N	Own HDS-B	3	Own R1050	8½	H	3.72–5.11	Own F50	L4IH	164	316	c	FX	50	6 1/4 x2 1/4 x 1/2	C
62	. . . . . KB-3	980	130	....	6650	2970	7.00/16-6	7.50/16-6	Own GRD214	6–3 1/8 x4 1/2	213	6.3	160	82–3400	4–2 5/8 x6 1/2	N	Own HDS-B	3	Own R1150	8F	H	4.22–5.28	Own F150	L4IH	195	367	c	FX	55	6 1/2 x2 1/4 x 1/2	C
63	. . . . . KB-3M	905	102	113	7000	2525	7.00/16-6	7.50/16-8	Own GRD214	6–3 1/8 x4 1/2	213	6.3	160	82–3400	4–2 5/8 x6 1/2	N	Own H41B	4	Own R1150	8F	H	4.22–5.28	Own F150	L4IH	221	367	c	TX	.....	6 1/2 x2 1/4 x 1/2	C
64	(a) KB-5	1130	135	177	13500	3630	6.50/20D	8.25/20	O-GRD 233	6–3 1/8 x4 1/2	233	6.3	181	93–3400	4–2 5/8 x6 1/2	N	Own H41B	4	Own R1360	8F	H	5.28–7.16	Own F350	LH4IH	294	509	c	TX	60	8x3x 1/4	T
65	(a) KB-6	1625	134	176	14500	4530	7.00/20D	8.25/20	Own BLD250	6–3 1/8 x4 1/2	251	6.3	200	100–3200	4–2 5/8 x5 1/2	N	Own WT97A	5	Own R1450	8F	H	5.62–7.16	Own F470	LH4IHV	305	539	c	TX	60	8 1/4 x3x 1/4	T
66	(a) KB-7	2075	134	176	16500	4960	7.50/20D	9.00/20	O-BLD 269	6–3 1/4 x4 1/2	269	6.3	222	100–3000	4–2 7/8 x5 1/2	N	Own F51	5	Own R1560	8F	H	6.50–7.16	Own F470	LH4IHV	368	633	c	TX	60	8 1/4 x3x 1/4	T

(Turn to Page 90, Please)

• Rear 11.00/20D.
• For shorter wheel bases—10x3 1/2 x 1/4.
▲ Auxiliary trans. Spicer 703F, three forward speeds.
♦ List price of vehicle to nearest dollar.
‡ Weight of complete vehicle with 5 gal. of gas.
▽ Rear Only; Front 7.00/17.
▲▲ Diameter front 2.343. Center 2.375, Rear 2.406. Total length 5.750.
△ Rear Only; Front 7.50/20.
■ Two speed rear axle with vacuum shift and power braking.
‡ For shorter wheel bases 8 1/2 x2 1/4 x7/32.
† Auxiliary trans. Spicer 6231B, three forward speeds.
* Rear 9.00/20, 10 ply.

(Continued from Page 89)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number, Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Sp'ds	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	Intern'l Cont'd																													
1	(a) KB-8	3150	137	197	20000	6487	9.00/20D	10.00/20	O-RED 361	6-4½x4½	361	6.3	282	126–3000	7-3¼x10‡‡	Y	Own F51	5	Own R1572	SF	H	6.43–8.51	Own F553	LH4IHV	407	709	c	PX	60	8‡‡ x3½x⅞	T
2	(a) KB-10	4000	149	197	22500	7310	10.00/20D	11.00/20	Own RED401	6-4½x5	401	6.3	318	140–2800	7-3¼x10‡‡	Y	Own F52	5	Own R1676	SF	H	6.43–8.05	Own F653	LH4IHV	484	829	c	FX	72	9⅛x3½x⅞	T
3	(a) KBR-11	5500	149	197	27000	8335	10.00/20D	12.00/20	O-RED 450	6-4½x5	450	6.3	360	148–2600	7-3¼x10‡‡	Y	Own F54	5	Tim S200P	28F	H	6.42–8.05	Own F750	WW4IA	616	1030	G	PX	72	10x3½x⅞	T
4	KBR-12	6750	155	179	28500	9950	11.00/20	12.00/20	O-Con. R6596	6-4½x5½	586	6.0	475	200–2600	7-3¼x13⅜	Y	Own F55	5	Tim S200P	2F	H	** –6.42	Own F750	BW4IA	746	....	GS	FX	66	10x3½x⅞	C
5	W-3042-H		179	227	30000	12140	10.00/20	11.00/22	O-Con. S6749	6-5½x5½	749	6.0	554	254–2600	7-3¼x15⅝	Y	Spi 7741	4	Tim S200P	2F	H	** –6.42	Own S6303	BW4IA	690	....	G	TX	84	10x3½x⅞	C
6	Kenworth (D) 521		161	215	35000	12200	10.00/20	11.00/22	Cum HB6	6-4⅞x6	672	17.5	500	200–2100	7-4½x16½	Y	BL 7841	4	Tim U200P	DR	H	6.42–7.84	Tim 36000TW	Ws4IA	752	1050	a	TD	72	9⅛x3¼x⅞	C
7	(D) 522		187	245	43000	12900	10.00/20	11.00/22	Cum HB6	6-4⅞x6	672	17.5	500	150–1800	7-4½x16½	Y	BL 7841	4	Tim U200P				Tim 36000TW	Ws4IA	1135					9⅛x3¼x⅞	
8	587		150	215	30000	10130	10.00/20	11.00/22	Bu LO525	6-4½x5½	525	5.5	385	135–2200	7-3x11½	Y	Fu 5A620	5	Tim U200P				Tim 35100TW	Ws4IA	752					9⅛x3¼x⅞	
9	Mar. Her. DVL-1		90	118	8200	4200	7.50/16S	8.25/18S	Willys MB	4-3⅛x4¾	134	6.4	105	60–4000	3-2.33x5.48	Y	Own	3	(Front Drive)			7.10	Own	4IH	202	327	M2			None	
10	Reo 19A		125	125	14000	▲4840	7.50/20	8.25/20	Own GC245	6-3½x4½	245	6.2	191	89–3100	7-2⅝x10.7	Y	WG‖T97	4	Tim 53000	SBF	H	5.66–6.16	Tim 30000	T 4IVH▾	311	483	Co	TX	64⅝	8⅞x2‡‡ x⅝x⅞	T
11	19AT		125	125	14000	▲5280	8.25/20	8.25/20	Own GC245	6-3½x4½	245	6.2	191	89–3100	7-2⅝x10.7	Y	WG T97	4	Tim 93000	dF	H	6.03–8.00	Tim 30000	T 4IVH▾	311	483	Co	TX	64⅝	8⅞x2‡‡ x⅝x⅞	T
12	19B		145	145	14000	▲5000	7.50/20	8.25/20	Own GC245	6-3½x4½	245	6.2	191	89–3100	7-2⅝x10.7	Y	WG T97	4	Tim 53000	SBf*	H	5.66–6.16	Tim 30000	T 4IVH▾	311	483	Co	TX	84⅝	8⅞x2‡‡ x⅝x⅞	T
13	19C		165	165	14000	▲5040	8.25/20	8.25/20	Own GC245	6-3½x4½	245	6.2	191	89–3100	7-2⅝x10.7	Y	WG T97	4	Tim 53000	SBf*	H	5.66–6.16	Tim 30000	T 4IVH▾	311	483	Co	TX	104⅝	8⅞x2‡‡ x⅝x⅞	T
14	21T		130	130	18000	▲6380	9.00/20	9.00/20	Own GC288	6-3½x5	288	6.2	225	96–3000	7-2⅝x10.7	Y	Cla 205V	5	Tim 95000	dF	H	6.08–8.12	Tim 31000	T 4IVH▾	344	583	Co	TX	69⅝	9x3x⅛	T
15	21B		145	145	18000	▲6080	8.25/20	9.00/20	Own GC288	6-3½x5	288	6.2	225	96–3000	7-2⅝x10.7	Y	Cla 205V	5	Tim 55000	SBf*	H	** –6.28	Tim 31000	T 4IVH▾	344	583	Co	TX	84⅝	9x3x⅛	C
16	21C		165	165	18000	▲6180	9.00/20	9.00/20	Own GC288	6-3½x5	288	6.2	225	96–3000	7-2⅝x10.7	Y	Cla 205V	5	Tim 55000	SBf*	H	** –6.28	Tim 31000	T 4IVH▾	344	583	Co	TX	104⅝	9x3x⅛	C
17	22T		130	130	20500	▲6630	9.00/20	9.00/20	Own GC310	6-3⅝x5	310	6.2	243	101–3000	7-2⅝x10.7	Y	Cla 205V	5	Tim 96000	dF	H	6.08–8.12	Tim 31000	T 4IVH▾	344	583	Co	TX	69⅝	9⅛x3¼x⅝x⅞	C
18	22B		145	145	20500	▲6410	9.00/20	9.00/20	Own GC310	6-3⅝x5	310	6.2	243	101–3000	7-2⅝x10.7	Y	Cla 205V–VO	5	Tim 56000	2F	H	6.16–7.3	Tim 31000	T 4IVH▾	344	583	Co	TX	84⅝	9⅛x3¼x⅝x⅞	C
19	22C		165	165	20500	▲6380	9.00/20	9.00/20	Own GC310	6-3⅝x5	310	6.2	243	101–3000	7-2⅝x10.7	Y	Cla 205V	5	Tim‖56000	SBF	H	** –6.16	Tim 31000	T 4IVH▾	344	583	Co	TX	104⅝	9⅛x3¼x⅝x⅞	C
20	22I		185	185	20500	▲6380	9.00/20	9.00/20	Own GC310	6-3⅝x5	310	6.2	243	101–3000	7-2⅝x10.7	Y	Cla 205V	5	Tim 56000	SBF	H	** –6.16	Tim 31000	T 4IVH▾	344	583	Co	TX	124⅝	9⅛x3¼x⅝x⅞	C
21	23T		130	130	23000	▲8180	10.00/20	10.00/20	Con B6371	6-4⅛x4⅝	371	6.0	279	100–2600	7-2⅞x13½	Y	Cla 270VO	5	Tim 98415	dF	H	6.53–8.53	Tim 32000	Ws4IA	514	747	G	TX	69⅝	9⅛x3¼x⅝x⅞	C
22	23B		145	145	23000	▲7380	10.00/20	10.00/20	Con B6371	6-4⅛x4⅝	371	6.0	279	100–2600	7-2⅞x13½	Y	Cla 270VO	5	Tim 72000	2F	H	** –8.4	Tim 32000	T 4IVH▾	370	644	G	TX	84⅝	9⅛x3¼x⅝x⅞	C
23	23L		185	185	23000	▲7510	10.00/20	10.00/20	Con B6371	6-4⅛x4⅝	371	6.0	279	100–2600	7-2⅞x13½	Y	Cla 270VO	5	Tim 58000	SBF	H	** –7.8	Tim 32000	T 4IVH▾	370	644	G	TX	124⅝	9⅛x3¼x⅝x⅞	C
24	25T		130	130	27400	▲8660	10.00/20	10.00/20	Con B6427	6-4½x4⅞	427	5.9	324	127–2700	7-2½x13‡‡	Y	Cla 270V–VO	5	Tim 98415	dF	H	6.53–8.53	Tim 35000	Ws4IA	514	744	G	TX	69⅝	9⅛x3¼x⅝x⅞	C
25	25BL & 25BT		145	145	27400	▲9360	10.00/20	10.00/20	Con B6427	6-4½x4⅞	427	5.9	324	127–2700	7-2½x13‡‡	Y	Cla 270VO&■	15	T-S-200P	2F	H	** –7.84	Tim 35000	Ws4IA	660	952	G	TX	84⅝	9⅛x3¼x⅝x⅞	C
26	25B		145	145	27400	▲8570	10.00/20	10.00/20	Con B6427	6-4½x4⅞	427	5.9	324	127–2700	7-2½x13‡‡	Y	Cla 270VO	5	T-S-200-P	2F	H	** –7.84	Tim 35000	Ws4IA	660	952	G	TX	84⅝	9⅛x3¼x⅝x⅞	C
27	25L		185	185	27400	▲8700	10.00/20	10.00/20]	Con B6427	6-4½x4⅞	427	5.9	324	127–2700	7-2½x13‡‡	Y	Cla 270V	5	T-S-200-P	2F	H	** –7.84	Tim 35000	Ws4IA	660	952	G	TX	124⅝	9⅛x3¼x⅝x⅞	C
28	Sterling HD97		148	175	24000	9150	9.00/20	11.00/20	Wau 6MZA	6-4¼x4¾	404	5.6	290	130–3000	7-2⅝x12½	Y	Fu 5A43	5	Tim Q100DPH	FHy	R	5.29–7.80	Tim 35011H	T4IHV	466	822	A	TX	67	9x7x¼	A
29	HD105		148	175	24000	9550	10.00/20	11.00/22	Wau 6MZA	6-4¼x4¾	404	5.6	290	130–3000	7-2⅝x12½	Y	Fu 5A43	5	Tim R100DPH	FHy	R	5.29–7.40	Tim 35011H	T4IHV	524	926	A	TX	67	9x3¼x¼	A
30	HD115		148	175	32000	10650	10.00/20	11.00/24	Wau 6SRKR	6-4⅝x5½	517	5.5	368	125–2250	7-3x13⅜	Y	Fu 5A62	5	Tim 8200P	2F	R	7.77–8.53	Tim 36000TW	Ws4IA	722	1054	A	TX	67	9x3¼x¼	A
31	HD145		148	175	36000	11250	11.00/20	12.00/24	Wau 6SRKR	6-4⅝x5½	517	5.5	368	125–2250	7-3x13⅜	Y	Fu 5A62	5	Tim 79721W	2F	R	7.69–11.36	Tim 36000TW	Ws4IA	614	922	A	TX	67	9¼x3⅝x3⅝x⅜	A
32	(D) HD115H		158	185	32000	11950	10.00/20	11.00/24	Cum HB600	6-4⅞x6	672	17.5	500	150–1800	7-4½x16½	Y	Fu 4B86	4	Tim 8200P	2F	R	7.77–8.53	Tim 36000TW	Ws4IA	722	1054	A	TX	68	9x3¼x¼	A
33	(D) HD145H		158	185	36000	12550	11.00/20	12.00/24	Cum HB600	6-4⅞x6	672	17.5	500	150–1800	7-4½x16½	Y	Fu 4B86	4	Tim 79721W	2F	R	7.69–11.36	Tim 36000TW	Ws4IA	614	922	A	TX	68	9¼x3⅝x3⅝x⅜	A
34	HC97		148	175	24000	9200	9.00/20	11.00/20	Wau 6MZA	6-4¼x4¾	404	5.6	290	130–3000	7-2⅝x12½	Y	Fu 5A43	5	Own 97H	CS	R	6.70–10.82	Tim 35011H	T4IHV	540	842	A	TX	67	9x7x¼	A
35	HC105		148	175	28000	9700	10.00/20	11.00/22	Wau 6MZA	6-4¼x4¾	404	5.6	290	130–3000	7-2⅝x12½	Y	Fu 5A43§	15	Own 137H	CS	R	6.70–10.82	Tim 35011H	T14IHV	540	842	A	TX	67	9x3¼x¼	A
36	HC115		148	175	32000	10350	10.00/20	11.00/24	Wau 8RKR	6-4⅝x5½	517	5.5	368	125–2250	7-3x13⅜	Y	Fu 5A62§	15	Own 137W	CS	R	6.70–10.82	Tim 36000TW	Ws4IA	648	974	A	TX	67	9x3¼x¼	A
37	HC144		148	175	36000	11250	10.00/22	12.00/24	Wau 6SRKR	6-4⅝x5½	517	5.5	368	125–2250	7-3x13⅜	Y	Fu 5A62§	15	Own 148W	CS	R	6.70–10.82	Tim 36000TW	Ws4IA	708	1042	A	TX	67	9¼x3⅝x3⅝x⅜	A
38	HC147		148	175	36000	11500	10.00/22	12.00/24	Wau 6SRKR	6-4⅝x5½	517	5.5	368	125–2250	7-3x13⅜	Y	Fu 5A62§	15	Own 147W	CS	R	6.70–10.82	Tim 36000TW	Ws4IA	708	1042	A	TX	67	9¼x3⅝x3⅝x⅜	A
39	HC175		158	185	45000	14600	12.00/24†	14.00/24‡	Wau 145GK	6-5¼x6	779	6.2	585	186–2100	7-3½x17¾	Y	Fu 4B86●	12	Own 175W	CS	R	7.31–12.42	Tim 27454W	Ws4IA	786	1152	A	TX	68	9¼x3⅝x3⅝x⅜	A
40	HC250		158	185	60000	18400	14.00/24‡	14.00/24‡	Wau 145GK	6-5¼x6	779	6.2	585	186–2100	7-3½x17¾	Y	Fu 4B86●	12	Own 251W	CS	R	7.31–12.42	Tim 27454W	Ws4IA	786	1157	A	TX	68	12x3½x3⅝	AL
41	(D) HC115H		158	185	32000	12250	10.00/20	11.00/24	Cum HB600	6-4⅞x6	672	17.5	500	150–1800	7-4½x16½	Y	Fu 4B86●	12	Own 137W	CS	R	6.70–10.82	Tim 36000TW	Ws4IA	648	974	A	TX	68	9x3¼x¼	A
42	(D) HC175H		158	185	45000	14930	12.00/24†	14.00/24‡	Cum HBD600	6-4⅞x6	672	17.5	500	150–1800	7-4½x16½	Y	Fu 4B86●	12	Own 175W	CS	R	7.31–12.42	Tim 27454W	Ws4IA	786	1152	A	TX	68	9¼x3⅝x3⅝x⅜	A
43	(D) HC250H		158	185	60000	18700	14.00/24‡	14.00/24‡	Cum HBD600	6-4⅞x6	672	17.5	500	150–1800	7-4½x16½	Y	Fu 4B86●	12	Own 251W	CS	R	7.31–12.42	Tim 27454W	Ws4IA	786	1152	A	TX	68	12x3½x3⅝	AL
44	Studebaker M5		113	113	4500	2120	6.50/16S	6.50/16S	Own 1M	6-3x4	170	6.5	134	80–4000	4-2⅛x5⅛	N	Own 664949	3	Own 663507	Hy	H	** –4.82	Own 664307	L4IH	157	276	Co	2I	45‡‡	7⅛x2‡⅛x⅛	T
45	M15A-20		120	120	7800	2960	7.00/17S	7.50/17S	Own 2M	6-3x4	170	6.5	134	80–4000	4-2⅛x5⅛	N	Own 673674	4	Own 664435	SF	H	5.66–6.60	Own 673625	LH4IH	216	342	a	TX	52‡‡	7‡‡x2‡‡x⅛x⅞	T
46	M15A-28		120	128	10000	3060	7.50/17S	7.50/17S	Own 2M	6-3x4	170	6.5	134	80–4000	4-2⅛x5⅛	N	Own 673674	4	Own 665174	SF	H	6.60–5.66	Own 673625	LH4IH	216	342	a	TX	60‡‡	8‡x2‡⅛x⅛	T
47	M16		128	195	13500	3630	7.00/20D	8.25/20	Own 3M	6-3⅞x4⅝	226	6.5	176	94–3600	4-2⅛x5‡‡	Y	Own 674989	4	Own 665171	SF	H	5.66–6.66	Own 664452	LH4IH	280	442	Co	TX	60‡‡	8⅛x2‡‡x⅛x⅞	T
48	M16(2-Sp)		128	195	15000	4090	7.00/20D	8.25/20	Own 3M	6-3⅞x4⅝	226	6.5	176	94–3600	4-2⅛x5‡‡	Y	Own 674989	4	Own 674681	SF	H	Dual Rge.	Own 664452	LH4IH	280	442	Co	TX	60‡‡	8⅛x2‡‡x⅛x⅞	T
49	Truckstell(C) F18-5		140	194	18500	▲5265	7.50/20°	10.00/20	Ford	8-3⅛x3¾	239	6.4	180	100–3800	3-2⅛x4.71	N	Ford & BL	12	Cla R1300	SF	H	5.67–6.83	Ford	L4IHV	355	610	a	TX	65¾	7½x3x.47	CTf
50	(C) F19-5-0		108	166	19500	▲5265	7.50/20°	10.00/20	Ford	8-3⅛x3⅛	239	6.7	180	100–3800	3-2⅛x4.71	N	Ford & BL	12	Cla R1300	SF	H	5.67–6.83	Ford	L4IHV	355	610	a	TX	65¾	7½x3x.47	CTf
51	(C) C18-5		144	197	18500	▲5395	7.50/20°	9.00/20	Chevrolet	6-3⅞x3‡‡	235	6.6	192	93–3100	4-2¾x5⅞	N	Chev & BL	12	Cla R1300	SF	H	5.67–6.83	Chevrolet	L4IHV	355	610	a	TD	67	7½x3x.47	CTf
52	(C) C19-5-0		114	173	19500	▲5395	7.50/20°	9.00/20	Chevrolet	6-3⅞x3‡‡	235	6.6	192	93–3100	4-2¾x5⅞	N	Chev & BL	12	Cla R1300	SF	H	5.67–6.83	Chevrolet	L4IHV	355	610	a	TD	67	7½x3x.47	CTf
53	Ward La Fr. D-1		149	220	25000	9500	10.00/20	11.00/20	Con B6427	6-4⅛x4⅞	427	6.1	325	127–....	7-2⅞x13½	Y	Fu 5A430	5	Tim 58415PA	B	R	** –6.14	Tim 35011TW	Ws4A	600	928	c	TM	68¼	9⅞x3x⅛	....
54	D-1B		149	220	25000	9500	10.00/20	11.00/20	Con 22R	6-4½x5½	501	5.4	384	148–....	7-2¾x14½	Y	Fu 5A620	5	Tim 58415PA	B	R	** –6.14	Tim 35011TW	Ws4A	600	928	c	TM	68¼	9⅞x3x⅛	....
55	D-1C		149	220	29000	9500	11.00/20	11.00/24	Con B6427	6-4⅛x4⅞	427	6.1	325	127–....	7-2⅞x13½	Y	Fu 5A430	5	Tim S-200P	S2	R	** –7.84	Tim 35011TW	Ws4A	673	1031	c	TM	68¼	9⅞x3x⅛	....
56	D-2		149	220	29000	12000	11.00/20	11.00/24	Con R6513	6-4½x5⅝	513	5.9	400	170–....	7-3¼x14½	Y	Fu 5A620	5	Tim S-200P	S2	R	** –7.84	Tim 35011TW	Ws4A	673	1031	c	TM	68¼	10x3x⅞	....
57	D-3		149	220	34000	12000	11.00/22	12.00/24	Con R6572	6-4½x5⅝	572	5.9	440	189–....	7-3¾x14½	Y	Fu 5A650	5	Tim U200P	S2	R	** –7.84	Tim 26458W	Ws4A	750	1159	c	TM	68¼	10x3x⅞	....
58	(D) D-5		149	149	35000	12500	11.00/22	12.00/24	Cum HB600	6-4⅞x6	672	17.5	500	150–....	7-4½x16¾	Y	Fu 5A650	5	Tim U200P	S2	R	** –6.42	Tim 26458W	Ws4A	750	1159	c	TM	68¼	10x3x⅞	....
	Four-Wheel-Drive																													
59	Corbitt 22FG		159	Opt	22000	.....	9.00/20	10.00/20	Con B6371	6-4½x4½	371	6.0	280	100–2600	7-2⅞x13½	Y	Fu 5A43	5	Tim R2090H	2F	H	** –8.43	Tim F2090H	L4IHV	....	868	a	TD	74	9x3x¼	DL
60	Dodge WDX		126	126	8700	.....	7.50/16S	9.00/16S	Own T-137	6-3¼x4½	230	6.7	185	94–3200	4-2½x4.8	Y	NP 38580	4	Own T137	HyF	H	4.89–5.83	Own T137	O4IH	210	311	Co	TX	52‡‡	6½x2⅞x⅝	T
61	FWD HA		132	156	17000	▲7470	8.25/20D	10.00/20	Wau BZ	6-4x4¼	320	5.9	223	95–2800	7-2⅝x10¼	Y	Own H	5	Own H	SF	H	6.6 –9.06	Own H	L4IHV	391	807	a	T4	79½	9x3x¼	T
62	HR		132	154	20000	▲8000	9.00/20	10.00/20	Wau MZA	6-4¼x4¾	404	5.6	291	129–2800	7-2⅝x12⅝	Y	Own H	5	Own H	SF	H	6.6 –9.06	Own H	L4IHV	391	807	a	T4	79½	9x3x¼	T
63	HG		154	154	20000	▲8050	9.00/20	10.00/20	Wau MZA	6-4¼x4¾	404	5.6	291	129–2800	7-2⅝x12⅝	Y	Own H	5	Own H	SF	H	6.6 –9.06	Own H	L4IHV	391	807	a	T4	89¾	7⅞x3x‡‡	C
64	SU		150	182	25000	▲10420	11.00/20D	12.00/20	Wau SRKR	6-4⅝x5½	517	5.5	365	126–2400	7-3x13⅜	Y	Own U	5	Own U	BF	H	6.7 –9.8	Own U	L4IHV	512	867	a	T4	90	7⅞x3x‡‡	C
65	SU‡		150	182	28000	10570	11.00/20D	12.00/20	Wau SRKR	6-4⅝x5½	517	5.5	365	126–2400	7-3x13⅜	Y	Own U	5	Own U	BF	H	6.7 –9.8	Own U	L4IHV	512	867	a	T4	90	8⅛x3x‡‡	C
66	M7		150	180	38600	▲15400	12.00/20D	12.00/20	Wau 145GK	6-5¼x6	779	6.2	585	186–2000	7-3½x17¾	Y	Own M	10	Tim 1758	2F	H	** –7.33	Wis F409	Ws4IA	578	976	a	T4	90	10⅛x3x‡‡	C
67	(D) M7D		150	180	38600	▲15700	12.00/20D	12.00/20	Cum HB600	6-4⅞x6	672	17.5	500	150–1800	7-4½x16¾	Y	Own M	10	Tim 1758	2F	H	** –7.33	Wis F409	Ws4IA	578	976	a	T4	90	10⅛x3x‡‡	C
68	(D) M10D		150	180	44000	16200	11.00/24D	12.00/24	Cum NHB600	6-5½x6	743	17.5	575	200–2000	7-4½x16¾	Y	Own M	10	Tim 79721	2F	H	** –7.5	Wis F409	Ws4IA	596	1030	a	T4	90	10⅛x3x‡‡	C
69	Marmon-MH440-4		158	170	20700	▲8700	9.00/20D	10.00/20	Her WXLC3	6-4¼x4¾	404	5.4	293	118–2800	7-2½x13¼	Y	Fu 5A430	5	Tim R2090W	2B	H	** –8.43	Tim F2090W	W....A	584	887	c	F	72	9‡‡x3x¼	T
70	Herr. MH555-4		161	173	24000	▲10200	10.00/20D	11.00/20	Her RXC	6-4⅝x5¼	529	6.3	390	131–2200	7-3x13¼	Y	Fu 5A620	5	Tim R3100W	2B	H	** –8.15	Tim F3100W	W....A	692	1039	c	F	72	10⅛x3x⅛	T

▲ Includes Cab.
† Rear only; Front 11.00/24.
‡ Rear only; Front 12.00/24.
° Front only; Rear 8.25/20.
§ Auxiliary transmission, Own OJ.
● Auxiliary transmission Own FJ.
* 2-Speed Axle Available.
▾—Lockheed Type Front and Timken Dual Primary Rear Brakes.
■ 6031 Auxiliary Transmission.

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Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	Forward Sp'ds	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make	Location	Type	Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimension (Min. Std. W. B.)	FRAME Side Rail Dimensions	Type
	Marmon Cont'd.																																
1	(C).....CM5-4	.....	134	134	13500	▲4847	7.50/20D	7.50/20	Ford	8–3⅞x3¾	239	6.4	176	100–3500	3–2½x4.71	N	Ford	4	Ford	S	H	** –6.67	Own M5	F.....H	302	563	a	F	60	7x2¾x½	T
2	(C).....CM6-4	.....	158	158	13500	▲4973	7.50/20D	7.50/20	Ford	8–3⅞x3¾	239	6.4	176	100–3500	3–2½x4.71	N	Ford	4	Ford	S	H	** –6.67	Own M5	F.....H	303	563	a	F	84	7x2¾x½	T
3	(C).....LD6P-4	.....	114	.....			15′		Ford	8–3⅞x3¾	239	6.4	176	100–3500	3–2½x4.71	N	Ford	4	Ford	S	T	** –4.11	Own O	F.....H	162	.....A		F						X
4	(C).....LD6-4	.....	114	.....	4700	▲2719	15′		Ford	8–3⅞x3¾	239	6.4	176	100–3500	3–2½x4.71	N	Ford	4	Ford	S	H	** –4.11	Own O	F.....H	162	.....A		F	40	5½x2¼x⅜	T
5	(C).....OT5-4	.....	122	.....	6800	▲3972	7.50/17	7.50/17	Ford	8–3⅞x3¾	239	6.4	176	100–3500	3–2½x4.71	N	Ford	4	Ford	S	H	** –4.86	Own I	F.....H	186	.....A		F	48	6x2¼x⅜	T
6	Oshkosh....W-307	.....	149	204	23600	10200	10.00/20	11.00/20	Her WXLC3	6–4¼x4¾	404	6.3	310	118–2500	7–2⅝x13¾	Y	Fu 5A43	5	Tim 58300	SF	H	** –7.8	Own W307	L41I	560	867	G	TX	82	8¼x3x¾	TF
7	.....W1700	.....	150	205	28000	11000	11.00/20D	12.00/20S	Her RXC	6–4⅝x5¼	529	5.4	380	128–2200	7–3x13¼	Y	Fu 5A620	5	Own W1700	2F	H	** –6.4	Own 1700	L4IH	630	975	G	TX	82	8¼x3x¾	TF
8	.....W-700	.....	150	204	30000	▲12000	11.00/20	12.00/20S	Her RXCO	6–4⅝x5¼	529	5.4	380	128–2200	7–3x12¾	Y	Fu 5A620	5	Own W700	2F	H	** –6.6	Own W700	L4IH	630	975	G	TX	82	10½x3x¾	TF
9	.....W-703	.....	150	204	30000	▲12200	11.00/20	12.00/20S	Her RXLD	6–4¾x5¼	558	5.4	405	141–2200	7–3½x13¼	Y	Fu 5A620	5	Own W700	2F	H	** –6.6	Own W700	L4IH	630	975	G	TX	82	10½x3x¾	TF
10	(D).....W-906	.....	158	190	38000	▲14900	12.00/20	14.00/20S	Cum HB600	6–4⅞x6	672	...	500	150–1800	7–4½x16	Y	Fu 4A86	4	Own W906	2F	H	** –6.2	Own W906	LT4IWS	645	975	G	TX	90	10½x3x¾	TF
11	.....W2200	.....	160	181	40000	16500	13.00/20D	14.00/20S	Bu MO779	6–5¼x6	779	...	575	188–2100	7–3¾x17	Y	Fu 4A86	12	Own W2200	2F	H	** –6.14	Own 2200	LT4IA	645	975	G	TX	90	10½x3½x2⅝	TF
12	.....W2201	.....	160	181	40000	16500	13.00/20D	14.00/20S	Bu MO893	6–5⅝x6	893	...	625	200–1800	7–3¾x17	Y	Fu 4A86	12	Own W2200	2F	H	** –6.14	Own 2200	LT4IA	645	975	G	TX	90	10½x3½x2⅝	TF
13	Peterbilt(D)270DD	10332	165	Opt	27000	12500	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741	12	U-200P	2F	R	** –6.42	Tim 36000W	Ws4IA	800	1250	a	FD	80½	10⅝x3½x⅞	TL
14	Walter(c.f.)...FN	.....	126	150	20000	7500	9.00/20D	10.00/20S	Wau MZR	6–4¼x4¾	404	5.6	290	100–2500	7–2⅝x12½	Y	Own FN	6	Own FNB	2	H	6.0–8.0	Own FN	O4IA	470	670	G	FI	84	7x2¾x¼	C
15	(c.f.)..FZM	.....	126	150	24000	8500	10.00/20D	12.00/20S	Wau MZR	6–4¼x4¾	404	5.6	290	100–2500	7–2⅝x12½	Y	Own FN	6	Own FMB	2	H	6.0–8.0	Own FJ	O4IA	470	670	G	FI	84	12x3½x½	B
16	(c.f.)..FKM	.....	126	150	24000	9000	10.00/20D	12.00/20S	Wau SRKR	6–4⅝x5¼	517	5.5	365	125–2200	7–3x13¾	Y	Own FJD	6	Own FMB	2	H	6.0–8.0	Own FJ	O4IA	470	670	G	FI	84	12x3½x½	B
17	(c.f.)..FCK	.....	126	138	30000	10500	10.00/24D	11.00/24S	Wau SRKR	6–4⅝x5¼	517	5.5	365	125–2200	7–3x13¾	Y	Own FC	6	Own FCB	2	H	7.5–9.0	Own FC	O4IA	585	890	D	FI	84	13x3¾x½	B
18	(c.f.)....FC	.....	138	162	32000	11000	11.00/24D	12.00/24S	Wau SRKR	6–4⅝x5¼	517	5.5	365	125–2200	7–3x13¾	Y	Own FC	6	Own FCB	2	H	7.5–9.0	Own FCR	O4IA	585	890	D	FI	96	14x3¾x½	B
19	(c.f.)..FGB	.....	126	162	32000	12000	11.00/24D	12.00/24S	Wau 145GK	6–5¼x6	779	5.7	580	175–2000	7–3½x17¾	Y	Own FA	6	Own FCB	2	H	7.5–9.0	Own FCR	O4IA	585	890	D	FI	84	14x3¾x½	B
20	(c.f.)..FGR	.....	126	162	42000	13000	12.00/24D	12.00/24	Wau 145GK	6–5¼x6	779	5.7	580	175–2000	7–3½x17¾	Y	Own FA	6	Own FCR	2	H	7.5–9.0	Own FCR	O4IA	585	890	D	FI	89	14x3¾x½	B
	Willys																																
21	Unv. Jp...CJ-2A	*1146	80	80	2937	‡1646	6.00/16	7.00/15	Own CJ-2A	4–3½x4½	134	6.4	105	60–4000	3–2.33x5.48	N	WG T90A	3	Spi 41-2	Hy	H	** –5.38	Spi 25	B4H	118	520	a	F	80	4x1¾x⅞	P
	Six-Wheelers Wheels Driven ▼																																
	Diamond T																																
22	.....901SD3010PA	.....	186	236	40000	13800	10.00/22D	11.00/20	Con R-6572	6–4¾x5¾	572	6.0	440	190–2600	7–3½x14½	Y	Spi 6252,703	15	T SD3010PA	2F	R	** –7.50	T 36021TW	Ws6IA	1230	.....A		TD	104½	10½x3½x⅞	T
23	.....901SW3012PA	.....	206	224	40000	13900	10.00/22D	10.00/22	Con R-6572	6–4¾x5¾	572	6.0	440	190–2600	7–3¾x14½	Y	Spi 6252,703	15	T SW3012PA	2F	R	** –6.16	T 36021TW	Ws6IA	1230	.....A		TD	124	10½x3½x⅞	T
24	(D)910SW3012PA	.....	206	206	40000	15400	10.00/22D	10.00/22	Cum HB-600	6–4⅞x6	672	17.	500	150–1800	7–4½x16¾	Y	Spi 7851, 703	15	T SW3012PA	2F	R	** –6.16	Tim 36021TW	Ws6IA	1082	.....A		TD	124	10½x3½x⅞	T
25	.(D)910SD462W	.....	206	206	50000	16700	11.00/22D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16¾	Y	Spi 7851, 703	15	T SD462W	2F	R	** –8.15	Tim 36021TW	Ws6IA	1012	.....A		TD	124	10½x3½x⅞	T
26	.(D)910SW456W	.....	206	206	50000	16500	11.00/22D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16¾	Y	Spi 7851-703	15	Tim SW456W	2F	R	6.8 –7.6	T36021TW	Ws6IA	1230	.....A		TD	124	10½x3½x⅞	T
27	F.W.D.....M6x6	.....	243	276	58000	▲21400	11.00/24D	11.00/24	Her HXE	6–5¾x6	935	5.5	650	198–2000	7–3½x16½	Y	Fu	8	Wis SD462	2F	L	** –8.15	Wis F409	Ws6IA	1080	1680	a	T6	183	10⅞x3x⅜	P
28	(D).....M6X6D	.....	180	276	58000	▲21800	11.00/24D	11.00/24	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16¼	Y	Fu	8	Wis SD462	2F	L	** –8.15	Wis F409	Ws6IA	1080	1680	a	T6	216	10⅞x3x⅜	P
	International (2)																																
29	(b)...KB-6F.4R	3200	151	194	22000	6915	7.00/20D	8.25/20	Own BLD250	6–3⅞x4½	251	6.3	200	100–3200	4–2⅝x5⅜	N	Own F51	5	Own RF1450	SF	H	6.16–6.66	Own F470	LH4IHV	495	869	c	PX	77	8½x⅞x⅞x⅞	T
30	(b)...KB-8F.4R	4850	161	215	27000	8575	8.25/20D	9.00/20	Own RED361	6–4¼x4½	3616	3.282	126–3000	7–3¾x10⅜	Y	Own F52	5	Own RF1560	8F	H	6.50–7.16	Own F550	LH6IHV	644	1105	c	PX	84	9¼x3⅞x3½	T
31	(b)...KB-11F.4R	6750	161	215	37000	10830	9.00/20D	10.00/20	Own RED450	6–4⅝x5	451	6.3	360	148–2600	7–3¾x10⅜	Y	Own F54	5	Own RF1670	8F	H	** –7.16	Own F760	TW6IA	738	1179	G	PX	84	10½x3⅞x3½	T
32	.....W-4064H	12900	203	239	40000	15360	10.00/22	11.00/22	O-Con. S6749	6–5½x5½	749	6.0	554	254–2600	7–3¾x15¾	Y	Spi 7741	4	Tim SW3012	WF	H	** –6.16	Own S6303	BW6IA	1168	.....G		FX	108	10x3½x⅞	C
33	Ken- (D)523.4R	.....	193	241	41000	14600	10.00/20	11.00/22	Cum HB6	6–4⅞x6	672	17.	500	200–2100	7–4½x16½	Y	BL 7841	4	Ti SW3012PA	WF	R	** –6.16	Tim 36000	Ws4rIA	924	1248	a	TD	102	9½x3¼x⅞	C
34	worth(D)524.4R	.....	193	241	54000	15100	10.00/20	11.00/22	Cum HB6	6–4⅞x6	672	17.	500	200–2100	7–4½x16½	Y	BL 7841	4	Tim SW452	WF	R	6.0 –7.6	Tim 36000	Ws4rIA	819	1192	a	TD	102	9½x3¼x⅞	C
35	.....528.4R	.....	186	234	40000	12500	10.00/20	10.00/22	Bud L0525	6–4½x5½	525	5.5	385	135–2200	7–3x11½	Y	Fu 5A620	5	Ti SW3012PA	WF	R	** –6.16	Tim 35100	Ws4rIA	924	1248	a	TD	102	9½x3¼x⅞	C
36	.....532.4R	.....	186	234	35000	12500	10.00/20	10.00/22	Wau 6MZR	6–4¼x4¾	404	5.9	300	112–2500	7–2⅝x12½	Y	Fu 5A430	5	Ti SW3012PA	WF	R	** –6.16	Tim 35100	Ws4rIA	924	1248	a	TD	102	9½x3¼x⅞	C
37	.....(D)548.4R	.....	193	241	54000	17000	11.00/22	12.00/24	Cum HB6	6–4⅞x6	672	17.	500	200–2100	7–4½x16½	Y	BL 7841	4	Tim SD462	DR	R	** –8.15	Tim 36000	Ws4rIA	819	1192	a	TD	109	9½x3¼x⅞	dbC
38	.....(D)552.4R	.....	255	255	54000	20700	13.00/24	13.00/24	Cum HB6	6–4⅝x6	672	17.	500	150–1800	7–4½x16½	Y	BL 7841	4	Tim SD462W	WF	R	** –8.15	Tim F3200W	Ws4rIA	1100	1192	a	TD	168	9½x3¼x⅞	dbC
	Marmon-Herr.																																
39	(C).....CM5-6	2790	156	....	22500	▲6673	7.50/20D	7.50/20	Ford	8–3⅞x3¾	239	6.4	176	100–3500	3–2½x4.71	N	Ford	4	Timken	S	H	** –6.67	Own M5	M	503	.....a		F	82	7½x3x¼	C
40	(C).....CM6-6	2822	180	....	22500	▲6710	7.50/20D	7.50/20	Ford	8–3¼x3¾	239	6.4	176	100–3500	3–2½x4.71	N	Ford	4	Timken	S	H	** –6.67	Own M5	M	503	.....a		F	106¾	7½x3x¼	C
41	.....MH-555-6	.....	260	260	37000	▲14900	11.00/20	11.00/20	Her RXC	6–4⅝x5¼	529	6.3	390	131–2200	7–3x13¼	Y	Fu 5A620	♦	Tim SD3000	2B	H	** –8.15	Tim F3100W	Ws..A	1092	1608		F	93	10⅛x3x⅞	T
42	.....MH440-6	.....	182	....	34000	▲10600	9.00/20	10.00/20	Her WXLC3	6–4¼x4¾	404	5.4	239	118–2800	7–2¾x13¼	Y	Fu 5A430	5	Tim SFD154	2B	H	** –8.43	Tim F2090W	Ws..A	876	C		F	96	9⅛x3x¼	T
43	Oshkosh....W703	.....	Opt	Opt	45000	16950	11.00/20D	12.00/20	Her RXLD	6–4¾x5¼	558	5.4	405	141–2200	7–3½x13¼	Y	Fu 5A650	12	Tim SD454W	2F	H	** –6.31	Own-Tim	L6IH	1080	1625	G	TX	Opt	10½–3½–⅝	B
44	(D)...W1600BD	.....	245	Opt	60000	22770	11.00/24D	12.00/24	Bu 6DC844	6–5¼x6½	844	...	600	180–1800	7–3¾x17	Y	Fu 4BI86	12	Tim SD462	2F	H	** –6.14	Own-Tim	LT6IA	1080	1625	G	TX	160	12¾–3½–⅝	B
45	/D)‡W1600BDH	.....	267	Opt	60000	24300‡	11.00/24D	12.00/24	Bu 6DC844	6–5¼x6½	844	...	600	180–1800	7–3¾x17	Y	Fu 4BI86	12	Tim SD462	2F	H	** –9.82	Own-Tim	LT6IA	1080	1625	G	TX	174	12¾–3½–⅝	B
46	(D)‡W1602BDH	.....	272	Opt	95000	29300	14.00/24D	14.00/24	Bu 6DC844	6–5¼x6½	844	...	600	180–1800	7–3¾x17	Y	Fu 4BI86	12	Tim SD472	2F	H	** –13.9	Own-Tim	LT6IA	....	2217	G	TX	177	12¾–3½–⅝	B
47	.....W1600BG	.....	245	Opt	60000	22770	11.00/24D	12.00/24	Bu MO893	6–5⅝x6	893	...	625	200–1800	7–3¾x17	Y	Fu 4BI86	12	Tim SD462	2F	H	** –9.82	Own-Tim	LT6IA	1080	1625	G	TX	160	12¾–3½–⅝	B
48	(D)...W1600CD	.....	259	Opt	60000	23400‡	11.00/24D	12.00/24	Cum 6HBI	6–4⅞x6	672	...	500	150–1800	7–4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	** –6.14	Own-Tim	LT6IA	1080	1625	G	TX	174	12¾–3½–⅝	B
49	(D)..W1600CDS	.....	259	Opt	60000	23700‡	11.00/24D	12.00/24	Cum 6HBIS	6–4⅞x6	672	...	635	200–1800	7–4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	** –9.82	Own-Tim	LT6IA	1080	1625	G	TX	174	12¾–3½–⅝	B
50	(D)..‡W1600CDH	.....	265	Opt	60000	24000‡	11.00/24D	12.00/24	Cum 6HBI	6–4⅞x6	672	...	500	150–1800	7–4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	** –9.82	Own-Tim	LT6IA	1080	1625	G	TX	172	12¾–3½–⅝	B
51	(D)..‡W1600CDSH	.....	267	Opt	60000	24300‡	11.00/24D	12.00/24	Cum 6HBIS	6–4⅞x6	672	...	635	200–1800	7–4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	** –6.14	Own-Tim	LT6IA	1080	1625	G	TX	174	12¾–3½–⅝	B
52	Peterbilt(D)344DT	13564	189	Opt	43000	16250	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741	12	Tim SW3012W	WF	A	6.00– 8.5	T 36000W	Ws6IA	1212	1734	a	FD	106½	10⅝x3¼x⅞	TL
53	(D).....345DT	14119	187	Opt	54000	17300	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741	12	Tim SW456W	WF	A	6.00–10.2	T 36000W	Ws6IA	1450	1626	a	FD	106½	10⅝x3½x⅞	TL
54	(D).....354DT	14360	187	Opt	56000	17450	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741	12	Tim SW456W	WF	A	6.00–10.2	T 27454W	Ws6IA	1450	1626	a	FD	106½	10⅝x3½x⅞	TL
55	(D).....355DT	14760	187	Opt	56000	17900	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741	12	Tim SD462W	2F	A	** –8.15	T 27454W	Ws6IA	1000	1626	a	FD	106½	10⅝x3½x⅞	TL
56	Reo.....25TL	.....	169	169	47000	▲12950	10.00/20	10.00/20	Con B6427	6–4½x4½	427	5.9	324	127–2700	7–2⅞x13⅜	Y	Cla 270V4■	15	T-SD-3000	2F	T	7.5	Tim 35000	Ws6IA	1020	1472	G	TD	108⅝	9½x3¼x⅝	CP
57	Sterling...HBS130	.....	164	183	32000	11000	8.25/20	10.00/20	Wau 6MZA	6–4¼x4¾	4045	6.2	290	130–3000	7–2⅝x12½	Y	Fu 5A43	5	T-SBD1555DPH	SF	L	6.80–13.14	T-35011H	T6Hy	664	1134	A	TX	83	9x3¼x¼	A
58	.....HDS140	.....	164	183	36000	11800	9.00/20	10.00/20	Wau 6MZA	6–4¼x4¾	4045	6.2	290	130–3000	7–2⅝x12½	Y	Fu 5A43	5	T-SD3010PA	2F	L	6.84–10.22	T-35011TW	Ws6IA	1074	1554	A	TX	83	9x3¼x¼	A
59	.....HW8160	.....	164	183	42000	12800	10.00/20	11.00/22	Wau 6SRKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¾	Y	Fu 5A62	5	T-SW3010PA	WF	L	5.40–8.50	T-36000TW	Ws6IA	1082	1574	A	TX	83	9x3¼x¼	A
60	.....HW8235	.....	182	193	52000	15700	11.00/20	11.00/24	Wau 145GK	6–5¼x6	779	6.2	585	186–2100	7–3½x17⅜	Y	Fu 4B86	4	T-SW-56P	WF	L	5.67–8.20	T-27454W	Ws6IA	1308	1892	A	TX	92	9¼x3½x⅜	A
61	.....HW8160H	.....	182	193	42000	14250	10.00/20	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Fu 4B86	4	T-SW3012PA	WF	L	4.71–6.17	T-36000TW	Ws6IA	1082	1574	A	TX	92	9x3¼x¼	A

(Turn to Page 390, Please)

▲ Includes Cab. ■ 6031 Auxiliary Transmission ♦ Auxiliary transmission, Spicer 8031. ‡ With power take-off ‡—Chassis Weights on Duals Front, Center and Rear. * Complete vehicle price at Toledo without Federal Tax ‡—Hydraulic Coupling.

AASHO Standards for Motor Vehicles

American Association of State Highway Officials submits revised recommendations relating to width, height, length, speed and permissible loads for national adoption

Uniform standards governing the maximum dimensions, weights and speeds of motor vehicles, proposed by the Highway Transport Committee of the American Association of State Highway Officials, have been adopted by a letter ballot of the member State highway departments, with a recommendation that they be incorporated in the motor vehicle laws of all States.

The Association recommends that the standards be considered for adoption by all States in order to promote efficiency in the interstate operation of motor vehicles, increase the safety of highway transportation and establish a basis for regulation of the many relationships between the dimensions and weights of motor vehicles and the strengths and capacities o. existing highways.

The standards, based upon years of research by State highway departments, and the Public Roads Administration, are advocated in lieu of recommendations previously made by the American Association of State Highway Officials on November 17, 1932, and of modified recommendations applicable during the war emergency period, which were adopted May 27, 1942.

The recommendations, as finally adopted, are as follows:

1. Width: No vehicle unladen or with load, shall have a total outside width in excess of 96 in. (Note: It is recognized that certain conditions inherent in the design of vehicles suggest the desirability of 102 in. as a standard of maximum width, but the existence of numerous bridges and a large mileage of highways too narrow for the safe accommodation of vehicles of such width precludes the present adoption of the higher standard of width. The State highway departments and Public Roads Administration are urged to give serious consideration to the desirability of eventual provision for the accommodation of vehicles 102 in. in width in planning the reconstruction of Federal-aid and State highways.)

2. Height: No vehicle, unladen or with load, shall exceed a height of 12 ft., 6 in.

3. Length: (a) No single truck, unladen or with load, shall have an overall length, inclusive of front and rear bumpers, in excess of 35 ft.

(b) No single bus, unladen or with load, shall have an overall length, inclusive of front and rear bumpers, in excess of 40 ft., provided that a bus in excess of 35 ft. in overall length shall have not less than 3 axles.

(c) No combination of truck-tractor and semi-trailer, unladen or with load, shall have an overall length, inclusive of front and rear bumpers, in excess of 50 ft.

(d) No other combination of vehicles shall consist of more than two units, and no such combination of vehicles, unladen or with load, shall have an overall length, inclusive of front and rear bumpers, in excess of 60 ft.

4. Speed: (a) Minimum speed. No motor vehicle shall be unnecessarily driven at such slow speed as to impede or block the normal and reasonable movement of traffic. Exception to this requirement shall be recognized when reduced speed is necessary for safe operation or when a vehicle or combination of vehicles is necessarily or in compliance with law or police direction proceeding at reduced speed.

(b) Maximum speed. No truck shall be operated at a speed greater than 45 mph. Passenger vehicles may be operated at such speeds as shall be consistent at all times with safety and the proper use of roads.

(c) Vehicles equipped with solid rubber or cushion tires shall be operated at a speed not in excess of 10 mph.

5. Permissible Loads: (a) No axle shall carry a load in excess of 18,000 lb. (Note: An axle load shall be defined as the total load transmitted to the road by all wheels whose centers may be included between two parallel transverse vertical planes 40 in. apart, extending across the full width of the vehicle.)

(b) No group of axles shall carry a load in pounds in excess of the value given in the following table corresponding to the distance in feet between the extreme axles of the group, measured longitudinally to the nearest foot:

Distance in feet between the extremes of any group of axles		Maximum load in pounds carried on any group of axles		Distance in feet between the extremes of any group of axles		Maximum load in pounds carried on any group of axles	
4	18	32,000	42,080	31	45	53,490	64,650
5	19	32,000	42,990	32	46	54,330	65,400
6	20	32,000	43,900	33	47	55,160	66,150
7	21	32,000	44,800	34	48	55,980	66,890
8	22	32,610	45,700	35	49	56,800	67,620
9	23	33,580	46,590	36	50	57,610	68,350
10	24	34,550	47,470	37	51	58,420	69,070
11	25	35,510	48,350	38	52	59,220	69,790
12	26	36,470	49,220	39	53	60,010	70,500
13	27	37,420	50,090	40	54	60,800	71,200
14	28	38,360	50,950	41	55	61,580	71,900
15	29	39,300	51,800	42	56	62,360	72,590
16	30	40,230	52,650	43	57	63,130	73,280
17		41,160		44		63,890	

(c) The maximum axle and axle-group loads recommended above are subject to reasonable reduction in the discretion of the appropriate highway authorities during periods when road subgrades have been weakened by water saturation or other cause.

(d) The operation of vehicles or combinations of vehicles having dimensions or weights in excess of the maximum limits herein recommended shall be permitted only if authorized by special certificate issued by an appropriate State authority.

REFRIGERATION DATA

Thermal conductivity of various insulating materials per hour per square foot per degree Fahrenheit per inch of thickness

Thermal Conductivity of Insulating Materials

Balsam Wool	.26
Celotex	.31
Corkboard (5.4 lb. per cu.ft.)	.25
Corkboard (7 lb. per cu. ft.)	.27
Corkboard (10.6 lb. per cu. ft.)	.30
Corning Wool (1½ lb. per cu. ft.)	.27
Dry-Zero	.24
Lata-Balsa	.35
Masonite	.33
Palco Wool	.26
Rock Cork	.33
Temlock	.33

Desirable Wall Conductivities for Perishables

(Wall conductivities generally desirable for the transportation of various types of perishables.)

Type of Truck	B.T.U. per hour per degree Ft., per square foot
Bakery, candy and bread trucks	.60
Trucks for bulk and smoked meats	.15 to .30
Trucks for sausage and fresh cut meats.	.10 to .20
Ice cream, quick-frozen food trucks	.06 to .05
Trucks for solid carbon-dioxide transport	.03 to .05

Temperatures Recommended for Transportation and Retail Storage

UNFROZEN

VEGETABLES	
Asparagus	33-34
Beans (green)	33-34
Beets	32-40
Broccoli	32-34
Cabbage	32-36
Carrots	33-36
Cauliflower	32-34
Celery	32-34
Corn (green)	36-38
Cucumbers	36-40
Lettuce	32-40
Onions	32-36
Peas (green)	32-36
Potatoes	35-40
Potatoes (sweet)	50-55
Radishes	32-36
Squash	33-36
Tomatoes	35-40

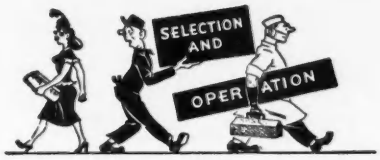
FRUITS	
Apples	32-36
Apricots	35-40
Bananas	55
Blackbeeries	36-40
Cantaloupes	35-40
Cherries	36-40
Cranberries	33-36
Gooseberries	36-40
Grapefruit	32-36
Grapes	32-36
Lemons	40-45
Oranges	35-45
Peaches	35-40
Pears	32-34
Plums	32-36
Raspberries	35-40
Strawberries	35-40

MEATS AND FISH	
Bacon	30-35
Beef (fresh)	32-40
Eggs	33-36
Fish (fresh)	32-40
Lamb	32-36
Mutton	32-36
Oysters (shell)	30-35
Pork (fresh)	30-34
Poultry	28-30
Veal	35-40

DAIRY PRODUCTS	
Butter	20-35
Cheese	35-40
Milk (sweet)	32-36
Milk (butter)	32-40

FROZEN FOODS	
Eggs	10-15
Fish	10-20
Fruits in syrup	10-20
Ice Cream	5-10
Meats	10-20
Vegetables	5-10

Courtesy American Society Refrigerating Engineers



Many fleet operators are increasing payloads by converting trucks to larger carrying capacity with third axles. Operators considering such changes will find much valuable data in this table. Data cover trailing and driving axles. In both cases the fleet operator will find the extra capacities obtainable; axle weights, types and sizes; loads distribution range; ample spacing; prices, etc.

Specifications for THIRD AXLES

THIRD AXLE MAKE AND MODEL and Truck Model Adapted To	Capacity (Lb.) See Explanatory Notes	Price (f. o. b. factory)	Weight (Lb.) with Max. Tires, Frame Extension, Etc.	Maximum Tire Size	LOAD DISTRIBUTION RANGE (First Figure or combination applies to center axle; second figure to third axle)		Axle Spacing (with maximum tires)	AXLE DATA			BRAKES (Standard)				Number of Points of Frame Support	Spring Size or Number Leaves Added	Spindle Diameter (at inner bearing)
								Make	Type	Size	Make and Type	Drum Material	Brake Diameter and Width	Lining Area			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Trailing Axles																	
FABCO																	
220 (Ford)	11000	775	2000	8.25/20	52–48	.....	44	Tim	T	4½	LH	CA	15x3½	192	2	48x2½	2††
220 (Chevrolet)	11000	775	2000	8.25/20	52–48	.....	44	Tim	T	4½	LH	CA	15x3½	192	2	48x2½	2††
220 (All other makes)	11000	775	2000	8.25/20	52–48	.....	44	Tim	T	4½	LH	CA	16x3½	205	2	48x2½	2††
330 (All other makes)	13000	975	3000	9.00/20	52–48	.....	44	Tim	T	4½	LH	CA	16x3½	205	2	48x3	2⅞
5600 (All other makes)	18000	1300	3200	11.00/20	55–45	.....	52	Tim	T	5	M	CA	16½x7	435	2	56x4	3¼
LITTLE GIANT																	
8-ton (For any 1½ ton truck)	16000	††	1920	8.25/20	53–47	.....	42	Ow-Shu	Sq	2¾	Opt	CA	16x3	187	4	42x2½	2⅝
10-ton (For any 2 ton truck)	18000	††	2450	9.00/20	50–50	.....	44	Ow-Shu	Sq	3	Opt	CA	16x3½	180	4	44x3	3
12-ton (For any 2½ to 5 ton truck)	20000	††	3000	10.00/20	50–50	.....	44	Ow-Shu	Sq	3¼	Opt	CA	17x4	250	4	44x3½	3
TRUCKTOR (x)																	
HLL (Ford 1½)	8800	550	1750	7.50/20	50–50	60–40	43	Own	Sr	3	LHV	CA	15x3½	196	6	38½x2½	2⅝
HLL (Chevrolet 1½)	8800	550	1750	7.50/20	50–50	60–40	43	Own	Sr	3	CHV	CA	16x3	219	6	38½x2½	2⅝
HLL (Light truck tires to 8.25/20)	11000	660	1895	8.25/20	50–50	60–40	45	Own	Sr	3	LHV	CA	16x2¼	132	6	38½x2½	2½
HLS (Medium truck tires to 9.00/20)	14000	1015	2265	9.00/20	50–50	60–40	46	Own	Sr	3¼	LHV	CA	16x3½	205	6	38½x3	2¾
HLR (Heavy truck tires to 10.00/20)	16000	1265	2710	10.00/20	50–50	60–40	48	Own	Sr	3½	WAM	CA	16½x6	251	6	40x3	2††
HR (Heavy duty tires to 12.00/20)	21000	1475	3177	11.00/24	50–50	60–40	52	Own	Sr	4	WAM	CA	16½x6	251	6	41½x3	3½
HR5 (Extra heavy duty tires)	30000	††	3358	12.00/24	50–50	60–40	53½	Own	Sr	5½	WAM	CA	17¼x5½	380	6	43½x4	3½
TRUXMORE																	
280F (Ford)	12000	719	2650	8.25/20	53–47	62–38	43½–44½	Own	Sq	2¾	LHV	CA	15x3½	200	4	••	2⅝
280C (Chevrolet)	12000	719	2650	8.25/20	53–47	62–38	43½–44½	Own	Sq	2¾	LHV	CA	15x3½	200	4	••	2††
280X	12000	719	2650	8.25/20	53–47	62–38	43½–44½	Own	Sq	2¾	LHV	CA	15x3½	200	4	••	2††
340	14000	880	2950	9.00/20	52–48	60–40	46–47	Own	Sq	3	LHV	CA	16x3½	210	4	••	2††
36	16000	1001	3500	10.00/20	52–48	65–35	47–48	Own	Sq	3¼	LHV*	CA	17¼x4	251	4	••	3⅛
42	17000	1070	3700	11.00/20	52–48	65–35	48–50	Own	Re	3½x3½	LHV*	CA	17¼x4	251	4	••	3¼
50	18000	1170	4100	11.00/24	50–50	65–35	49–53	Own	Sq	3½	LHV*	CA	17¼x5	350	4	••	3½
50X	25000	††	4400	12.00/24	50–50	65–35	52–53	Own	Re	3½x4½	M	CA	17¼x5½	400	4	••	3½
UTILITY																	
25 (For any 1½-2 ton truck)	9000	505	1100	7.50/20	55–45	66–33	41	Own	Sq	2½	BH†	CA	16x3½	230	4	None	2¼
30 (For any 3½ ton truck)	13000	745	1600	9.00/20	55–45	66–33	44	Own	Sq	3	BH†	CA	17x4	270	4	None	2¾
35 (For any 5 ton truck)	18000	835	1900	10.50/24	55–45	66–33	50	Own	Sq	3½	OMV†	CA	16x5	300	4	None	3
Driving Axles																	
FABCO																	
520 (Ford)	10500	1400	2400	8.25/20	50–50	.....	44	Tim	D	.....	FH	CA	15x3½	192	2	48x2½	2⅝
520 (Chevrolet with H. D. Axle)	10500	1475	2400	8.25/20	50–50	.....	44	Chev	D	.....	CH	CA	16x3	176	2	48x2½	2⅝
520 (All other makes)	10500	(z)	2400	8.25/20	50–50	.....	44	Match	D	.....	LH	CA	Match	(z)	2	48x2½	z
630 (All other makes)	13000	(z)	3000	10.00/20	50–50	.....	48	Match	D	.....	LH	CA	Match	(z)	2	53x3	z
THORNTON DRIVE																	
A1 Bogie (Ford 1½-Ton)	11250	.....	6500	8.25/20	50–50	.....	42⅝	Ford	D	3½	LH	CA	15x3½	198	4	42⅝x2¼	2⅝
A2 Bogie (Various)	12750	.....	.....	8.25/20	50–50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2⅝
A3 Bogie (Chevrolet 1½-Ton)	11250	.....	6330	8.25/20	50–50	.....	44⅛	Chev	D	3½	LH	CA	18x3	218	4	44⅛x2¼	2⅝
A3a Bogie (Chevrolet 2-Ton)	12500	.....	7230	8.25/20	50–50	.....	44⅛	Chev	D	4	LH	CA	18x3	218	4	44⅛x2¼	2⅝
A6 Bogie (Various)	14250	.....	.....	9.00/20	50–50	.....	47⅛	Eaton	D	3½x4½	LH	CA	16¼x3½	207	4	47⅛x2¼	2⅝
A9 Bogie (Dodge WF and WH)	12750	.....	7020	8.25/20	50–50	.....	46½	Eaton	D	4¼	LH	CA	15x3½	198	4	46½x2¼	2⅝

NOTES ON HEADINGS

General—(a) The capacity of the third axle (Column 2) is not to be confused with the total capacity made possible on the converted vehicle.

Column 3. The price of the unit includes the standard brakes specified in brake column and frame extensions that extend forward under the cab. Tires and brake (air or vacuum) power are not included in price nor is the cost of installation.

Column 4. Weight of third axle unit includes all appurtenances and maximum tires.

Column 15 gives brake lining area of attachment unit only.

ABBREVIATIONS

††—On application
*—Mechanical Air Optional
**—Truxmore—Heavy cast beams (cushioned by patented spring arrangement) used in place of leaf springs
(x)—Patented 4-wheel chain drive available for all Trucktor units
(z)—Depends upon installation

†—OPTIONAL BRAKES

Utility—Own or Westinghouse "Air"

COLUMN 9

Chev—Chevrolet
Eaton
Ford—Ford
Own—Own
Shu—Shuler
Tim—Timken

COLUMN 10

D—Driving
Re—Rectangular
Sr—Solid round
Sq—Square
T—Tubular

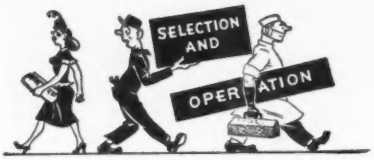
COLUMN 12

A—Air
B—Bendix
C—Chevrolet
F—Ford
H—Hydraulic
L—Lockheed
M—Mechanical
O—Own
V—Vacuum Power
W—Westinghouse

COLUMN 13

CA—Cast Alloy Iron

POWER Ratings



with and without standard accessories, of gasoline and diesel engines in current production

ENGINE MAKE AND MODEL	Number of Cylinders Bore and Stroke (In.)	MAX. BRAKE H.P. at R.P.M.		Piston Displacement (Cu. In.)	Compression Ratio	TORQUE	Engine Weight without Carburetor or Ignition (Lb.)
		With Bare Engine	With Standard Accessories			Maximum Torque at R.P.M. (Lb. Ft.)	
AUTOCAR							
377	6-4x5	119-2800	.....	377.0	5.85	292-1400 (BE)	1230
447	6-4¼x5½	145-2700	.....	447.0	6.25	352-1300 (BE)	1385
501	6-4½x5½	165-2700	.....	501.0	6.25	402-1100 (BE)	1395
BUDA							
K-428	6-4⅛x4⅜	107-2400	95-2400	428.0	5.33	296-1100 (EA)	905
LO-525	6-4½x5½	157-2400	139-2400	525.0	5.00	396-1200 (EA)	1195
6MO-893	6-5⅛x6	199-2000	170-2000	893.0	5.50	490-1000	2400
6MO-970	6-5⅛x6½	172-1400	147-1400	970.0	5.43	545-1000	2400
CHEVROLET							
1946	6-3⅛x3¼	90-3300	81.5-3100	216.5	6.50	168-1100 (EA)	554
1946 (Note 1)	6-3 9/16x3 15/16	93-3100	83.5-3000	235.5	6.62	182-1000 (EA)	560
CONTINENTAL							
F-4124	4-3x4⅜	46-3000	.....	123.7	6.50	86-1400 (BE)	395
F-4140	4-3 9/16x4⅜	52-3000	.....	139.6	6.30	108-1400 (BE)	395
F-4162	4-3⅞x4⅜	58-3000	.....	162.4	6.10	122-1600 (BE)	395
F-6186	6-3x4⅜	59-3000	.....	185.6	6.40	139-1000 (BE)	515
F-6209	6-3⅛x4⅜	70-3000	.....	209.4	6.10	153-1200 (BE)	515
F-6226	6-3 3/16x4⅜	72-3000	.....	226.0	6.00	168-1000 (BE)	515
M-6271	6-3⅝x4⅜	89-2800	.....	270.9	6.00	203-1200 (BE)	755
K-6271	6-3⅝x4⅜	105-2800	.....	270.9	....	216-1200 (BE)	940
M-6290	6-3⅞x4⅜	93-2800	.....	289.9	6.00	217-1000 (BE)	755
K-6290	6-3⅞x4⅜	111-2800	.....	289.9	....	231-1200 (BE)	940
M-6330	6-4x4⅜	104-2800	.....	329.4	6.10	245-1000 (BE)	755
K-6330	6-4x4⅜	125-2800	.....	329.4	6.30	264-1200 (BE)	940
B-6371	6-4⅛x4⅜	100-2600	.....	370.9	6.00	278-1000 (BE)	870
B-6427	6-4⅛x4⅝	127-2600	.....	427.2	5.90	323-1200 (BE)	875
T-6427	6-4⅛x4⅞	151-2600	.....	427.2	6.20	340-1200 (BE)	1075
22-R	6-4½x5¼	148-2400	.....	501.0	5.70	387-1200 (BE)	1360
R-6513	6-4½x5⅜	170-2600	.....	512.9	5.90	400-1200 (BE)	1525
R-6572	6-4⅝x5⅝	189-2600	.....	571.7	5.90	440-1200 (BE)	1525
R-6602	6-4⅞x5⅜	199-2600	.....	602.0	5.80	484-1200 (BE)	1525
DODGE							
T-112, T-114	6-3¼x4⅜	95-3600	80-3400	217.8	6.60	172-1200 (BE)	500
T-116	6-3¼x4⅝	102-3800	80-3200	230.2	6.70	184-1200 (BE)	525
T-137	6-3¼x4⅝	94-3200	74-2800	230.2	6.70	185-1200 (BE)	570
T-118, T-123	6-3⅞x4¼	109-3600	87-3200	236.6	6.60	192-1200 (BE)	575
T-120, T-130	6-3⅞x4½	114-3600	97-3200	250.6	6.60	204-1200 (BE)	590
T-136	6-3⅞x4½	115-3200	108-3200	281.6	6.50	225-1200 (BE)	.....
T-135	6-3¾x5	128-3000	111-2800	331.3	6.50	270-1200 (BE)	.....
FORD							
59A	8-3⅛x3¾	100-3800	89-3800	239.4	6.75	180-2000 (BE)	.....
5GA, C, Y, T	6-3.30x4.4	90-3300	.....	226.0	6.70	180-1200 (BE)	.....
GMC (General Motors Truck)							
228	6-3 9/16x3 13/16	95-3200	85-3000	228.0	6.75	183-1000 (BE)	.....
236	6-3 5/16x3 13/16	97-3200	87-3000	236.1	6.75	187-1000 (EA)	.....
248	6-3 1/16x3 11/16	100-3100	89-3000	248.5	6.75	202-1000 (BE)	.....
270	6-3⅝x4	104-3000	95-3000	269.5	6.75	222-1000 (BE)	.....
308	6-3 11/16x4½	122-3200	100-2800	308.2	6.00	241-1000 (BE)	.....
361	6-4⅛x4½	136-3000	115-2800	360.8	6.00	273-1000 (BE)	.....
426	6-4½x5	145-2600	127-2400	425.6	6.00	345-1000 (BE)	.....
477	6-4½x5	154-2600	135-2400	477.1	6.00	385-1000 (BE)	.....
HERCULES							
OXLD	6-3⅞x4¼	91-3200	77-3200	236.7	6.50	189-1400 (BE)	445
JXE	6-3½x4½	91-3200	77-3200	245.0	6.80	184-1400 (BE)	590
JXB	6-3⅝x4¼	98-3200	83-3200	263.0	6.50	190-1400 (BE)	605
JXC	6-3⅝x4¼	103-3200	87.5-3200	282.0	6.50	207-1400 (BE)	605
JXD	6-4x4¼	113-3000	96-3000	320.0	6.50	240-1200 (BE)	605
JXLD	6-4x4½	131-3200	111-3200	339.0	6.90	272-1400 (BE)	630
WXC-3	6-4¼x4½	131-2600	111-2600	383.0	6.60	296-1400 (BE)	820
WXLC	6-4x4¾	123-2600	104-2600	358.0	6.60	275-1200 (BE)	811
WXLC-3	6-4¼x4¾	139-2600	118-2600	404.0	6.60	312-1300 (BE)	825
RXB	6-4½x5¼	137-2400	116-2400	501.0	6.50	350-1200 (BE)	1000
RXC	6-4⅝x5¼	143-2400	121-2400	529.2	6.50	372-1200 (BE)	1010
RXLC	6-4⅝x5¼	146-2400	124-2400	529.2	6.20	408-1100 (BE)	1195
RXLD	6-4¾x5¼	154-2400	131-2400	558.0	6.50	430-1100 (BE)	1195
HXB	6-5x6	159-2000	135-2000	707.0	5.75	502-900 (BE)	1810
HXC	6-5¼x6	175-2100	145-2000	779.0	5.75	555-900 (BE)	1810
HXD	6-5½x6	202-2000	172-2000	855.0	5.75	645-900 (BE)	1830
HXE	6-5¾x6	227-2000	193-2000	935.0	6.20	750-900 (BE)	1830

ENGINE MAKE AND MODEL	Number of Cylinders Bore and Stroke (In.)	MAX. BRAKE H.P. at R.P.M.		Piston Displacement (Cu. In.)	Compression Ratio	TORQUE	Engine Weight without Carburetor or Ignition (Lb.)
		With Bare Engine	With Standard Accessories			Maximum Torque at R.P.M. (Lb. Ft.)	
INTERNAT'L							
GRD-214	6-3 5/16x4½	82.4-3400	73-3200	213.2	6.30	158-1000 (EA)	593*
GRD-233	6-3 5/16x4½	93-3400	80-3400	282.6	6.30	176-800 (EA)	624*
BLD-250	6-3 7/16x4½	99.8-3200	84-3000	250.5	6.30	194-800 (EA)	875*
BLD-269	6-3 9/16x4½	100-3000	89-2800	269.1	6.30	216-1000 (EA)	874*
RED-261	6-4⅛x4½	126-2800	112-2800	361.8	6.30	278-1000 (EA)	1067*
RED-401	6-4½x5	140-2800	126-2800	401.9	6.30	314-1000 (EA)	1090*
RED-450	6-4⅝x5	148-2600	133-2600	451.0	6.30	348-1000 (EA)	1076*
REO							
GC-245	6-3 1/16x4¼	89-3100	.....	245.0	6.20	191-1000 (BE)	783*
GC-288	6-3½x5	94-3000	.....	288.0	6.20	221-1200 (BE)	780*
GC-310	6-3⅝x5	101-3000	.....	310.0	6.20	241-900 (BE)	785*
WAUKESHA							
6BZ	6-4x4¼	105-3000	89-3000	320.0	5.75	235-1000 (BE)	706
6MZA	6-4½x4¾	128-2800	113-2800	404.0	5.90	290-1000 (BE)	920
140-GKA	6-4½x5½	142-2250	127-2250	525.0	6.00	425-1000 (BE)	1390
6SRKR	6-4⅝x5½	126-2250	109-2250	517.0	5.50	369-800 (BE)	1225
140-GZ (B)	6-4⅝x5½	188-2600	171-2600	554.0	6.40	460-800 (BE)	1390
145-GK (A)	6-5¼x6	186-2000	172-2000	779.0	6.20	590-1200 (BE)	1810
145GZ	6-5½x6	220-2000	206-2000	817.0	6.00	615-1200 (BE)	1810
6WAK	6-6¼x6½	235-1800	193-1300	1197.0	5.20	865-900 (BE)	3050
WHITE							
100A	6-3 7/16x4½	90-2800	.....	250.0	6.75	185-1400 (BE)	982
120A	6-3 7/16x4½	110-2600	.....	318.0	6.40	250-1200 (BE)	1003
140A	6-3 7/16x5⅛	125-2600	.....	362.0	6.28	285-1400 (BE)	1060
150A	6-4x5⅛	135-2800	.....	386.0	6.40	315-1300 (BE)	1300*
260A	6-4⅝x5	170-2800	.....	451.0	6.25	350-1200 (BE)	1409*
280A	6-4⅝x5	184-2800	.....	504.0	6.00	405-1200 (BE)	1442*
WILLYS							
CJ-2A	4-3⅛x4⅜	63-4000	.....	134.2	6.48	105-2000 (BE)	364

DIESELS

BUDA							
6-DT-468	6-4½x5½	113-2000	89-2000	468	14.2	268.5-1100	1435
6-DC-844	6-5¼x6½	180-1800	150-1800	844	13.0	460-1100	2850
■6-DCS-844	6-5¼x6½	225-1800	185-1800	844	.....	530-1250	.....
CONTINENTAL							
KD-6330	6-4x4⅜	88.2-2400	.....	329	15.0	282-1200	1090
TD-6427	6-4⅝x4⅞	112-2400	.....	427	15.0	300-1200	1270
RD-6572	6-4¾x5⅜	150-2200	.....	572	15.0	400-1200	1785
CUMMINS							
HB-400	4-4⅞x6	‡100-1800	‡83-1800	448	17.0	340-800	1930
HB-600	6-4⅞x6	‡150-1800	125-1800	672	17.0	500-800	2540
■HBS-600	6-4⅞x6	‡200-1800	175-1800	672	14.0	625-1400	3000
NHB-600	6-5½x6	200-2100	174-2100	743	13.5	575-1400	2500
■NHBS-600	6-5½x6	275-2100	240-2100	743	13.5	710-1600	3520
GEN'L MOTORS							
3-71	3-4¼x5	.....	‡100-2000	213	16.0	300-1300	1175
4-71	4-4¼x5	.....	‡133-2000	284	16.0	400-1300	1300
6-71	6-4¼x5	.....	‡200-2000	425	16.0	600-1300	1655
HERCULES							
DJXB	6-3½x4½	77-2600	66-2600	260	15.0	179-1300	950
DJXC	6-3¾x4½	83-2600	71-2600	298	15.0	208-1300	950
DJXH	6-3¾x4½	99-2600	84-2600	298	15.0	320-1300	980
DWXC	6-4x4¾	118-2600	100-2600	358	15.0	284-1600	1350
DWXD	6-4¼x4¾	135-2600	115-2600	404	15.0	320-1600	1350
DRXB	6-4⅝x5¼	132-2200	112-2200	474	15.0	340-1200	1600
DRXC	6-4⅝x5¼	147-2200	125-2200	529	15.0	395-1200	1600
DFXB	6-5x6	190-2100	162-2100	707	14.8	530-1350	2500
DFXC	6-5¼x6	204-2100	173-2100	779	14.8	585-1350	2500
DFXD	6-5½x6	217-2100	184-2100	855	14.8	645-1200	2500
DFXE	6-5⅝x6	228-2100	194-2100	895	14.8	680-1200	2500
DFXH	6-5¾x6	260-2100	221-2100	935	14.8	750-1200	2575
WAUKESHA							
140HS	6-4¼x5½	114-2250	95-2250	468	.....	342-1000	1510
140HK	6-4½x5½	128-2250	109-2250	525	.....	383-1000	1550
145HK	6-5¼x6	174-2000	148-2000	779	.....	550-900	1885
148DK	6-5¼x6	168-2000	138-2000	779	17.5	530-1200	2150
6WAKH	6-6¼x6½	202-1800	162-1600	1197	.....	811-700	3200
6WAKD	6-6¼x6½	225-1600	185-1600	1197	16.5	845-900	3400

ABBREVIATIONS:

*—Weight with ignition and carburetor
■—Supercharged
‡—Without fan or muffler
†—Rated with generator and water pump, but no fan or muffler
A—Also available in "High-Output" model developing greater power at higher speeds.
(BE)—Bare Engine
(EA)—With Standard Accessories
B—"High-Output" model

Note 1: On c.o.e. models bare engine develops 90 hp.@3300; with accessories 80 hp.@3000; torque is 179 lb.-ft.@1000 (EA)

STATISTICS

TRUCK AND TRAILER PRODUCTION AND REGISTRATION DATA

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1946 Truck Trailer Production*

Type of Trailer	Twelve Months
Vans	
Insulated	1,128
Refrigerated	2,256
Furniture	1,652
All other closed top	27,586
Open top	2,029
Total Vans	34,651
Racks	
Cattle Racks	4,932
Stake Racks	3,251
Total Racks	8,183
Tanks	
Petroleum	1,799
Other	827
Total Tanks	2,626
Pole and Logging	
Single Axle	5,970
Tandem Axle	1,598
Total	7,568
Platforms	11,762
Low-bed haulers (over 15 ton)	1,976
Off-highway	619
Dump Trailers	697
All other Trailers	2,537
Total—All Trailers	70,619
Trailer Chassis	5,615
Total—Trailers and Chassis	76,234

* Industry Division—Bureau of the Census.

Truck Trailer Production

(Civilian)—By Years*

Year	Number
1939	24,182
1940	27,118
1941	41,869
1942	8,408
1943	8,054
1944	24,092
1945	33,266
1946	70,619

* War Production Board and Bureau of the Census.

Trailer Registrations

(As of Dec. 31, 1946)

STATES	TRAILERS House or Tourist	TRAILERS Commercial	Total all Trailers
Alabama	.....	8,392	8,392
Arizona	7,912	4,797	12,709
Arkansas	382	21,753	22,135
California	66,400	241,416	307,816
Colorado	.....	3,573	3,573
Connecticut	10,775	3,463	14,238
Delaware	.....	.....	2,939
District of Columbia	.....	.....	1,256
Florida	.....	.....	42,692
Georgia	15,954	7,328	23,282
Idaho	22,736	706	23,442
Illinois	.....	.....	41,758
Indiana	9,529	106,627	116,156
Iowa	.....	.....	107,378
Kansas	.....	.....	11,580
Kentucky	.....	.....	.....
Louisiana	1,236	27,049	28,285
Maine	.....	.....	16,376
Maryland	.....	.....	14,112
Massachusetts	.....	.....	38,774
Michigan	11,571	194,262	205,833
Minnesota	47,084	10,091	57,175
Mississippi	.....	.....	8,000
Missouri	.....	.....	64,350
Montana	.....	.....	4,855
Nebraska	2,531	5,582	8,113
Nevada	.....	.....	3,000
New Hampshire	.....	.....	7,570
New Jersey	.....	.....	19,678
New Mexico	.....	.....	4,684
New York	.....	.....	90,358
North Carolina	.....	.....	62,963
North Dakota	1,086	.....	1,086
Ohio	.....	.....	155,000
Oklahoma	1,768	8,239	10,007
Oregon	1	1	1
Pennsylvania	.....	.....	67,985
Rhode Island	.....	.....	2,500
South Carolina	.....	.....	7,347
South Dakota	.....	.....	27,214
Tennessee	.....	.....	.....
Texas	.....	.....	84,000
Utah	.....	.....	1,143
Vermont	.....	.....	4,463
Virginia	17,244	8,543	25,787
Washington	4,329	45,506	49,835
West Virginia	5,842	714	6,556
Wisconsin	2,549	7,168	9,917
Wyoming	.....	.....	10,892
Total	.....	.....	1,835,004

Truck Dealers, Wholesalers, Independent Repair Shops*

	Total Truck Dealers	Wholesalers	Independent Repair Shops
1928	23,869	3,796	37,615
1929	24,068	3,912	43,863
1930	25,436	4,028	47,882
1931	26,137	4,668	53,898
1932	25,952	5,051	58,045
1933	23,746	5,337	59,547
1934	....	5,430	65,064
1935	....	5,757	64,518
1936	23,045	5,905	60,574
1937	24,853	5,874	56,423
1938	27,248	5,934	51,709
1939	26,909	6,019	50,406
1940	24,575	6,176	49,091
1941	24,992	6,575	49,208
1942	32,291	6,631	47,552
1943	27,820	6,130	43,540
1944	....	6,101	42,166
1945	26,370	6,217	41,193
1946	27,159	6,612	42,702
1947	29,397	7,328	49,485

* Trade List Department, Chilton Company.

Wholesale Value of Repair Parts and Accessories Production*

Year	Wholesale Value
1933	$ 234,461,000
1934	304,642,000
1935	378,323,000
1936	448,527,000
1937	464,619,000
1938	348,068,000
1939	454,673,000
1940	553,004,000
1941	718,212,000
1942	471,957,000
1943	527,710,000
1944	816,724,000
1945	1,284,926,000
1946	1,690,000,000

* Estimated on basis of excise tax receipts.

1 Included with trucks. The trailer table was compiled by Commercial Car Journal from material secured direct from the motor vehicle commissioners of the various states. Most states do not segregate commercial trailers.

TRUCKS in USE

By Makes . . . . By States . . .

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DIVCO 96
DODGE 98
FEDERAL . . . . . p. 98
FORD 98
GMC 98

Model	Ala.	Ariz.	Ark.	Calif.	Colo.	Conn.	Del.	D. C.	Fla.	Ga.	Idaho	Ill.	Ind.	Iowa	Kan.	Ky.	La.	Me.	Md.	Mass.	Mich.	Minn.	Miss.	Mo.	Mont.
AUTOCAR																									
6 Mo. '46	8	3	2	135	15	76	6		50	9	5	46	13	2	3	3	14	2	31	151	15	8	1	32	4
'45	5			200	20	88	10	2	65	14	3	88	35	7	8	4	12	9	46	210	16	49		36	4
'44		14		157	3	47	6					20	16		3	3	1	2	32	155	14	7	1	14	1
'43				12		1	1					4			1		1		5	8					
'42	2	6		34	2	11	6			2	4	15	4		4	7	11		33	56	4		2	2	1
'41	1	6		299	4	139	14	3	13	12	2	103	9		1	8	1	8	78	309	16	1	2	41	3
'40	2	8		112	1	66	8	14	3	2		61	5	3		6	3	6	35	262	27	1		20	
'39		1	2	88		62	12	8	5			85	9	12		10	2	2	58	187	19	1		24	1
'38	1	3		86	2	43	9	14	5			55	2	5	1			2	47	180	12	7		20	
'37				133	1	54	11	12	1	1		55	3	1	1	3		3	54	201	22	6		9	
'36	1		1	51	1	45	7	4	3		1	50	3		2			3	32	180	18	1		6	1
'35		1		25		35	3	3		2		21	1		1			4	15	113	6	3		5	
'34			1	27		29	5	1		1		45				1		4	25	104	6	9		4	
'33	1			27		20	4	3	1	2		28	3	2				3	22	77	2	1		8	
Before '33	5	5	5	266	3	61	13	9	4	5	1	164	14	5	7	5	1	6	71	208	23	15	5	48	1
Unid.*	1		1		6				1			3	4			2	1		1	5	59			4	
Total	27	47	12	1652	58	797	115	73	151	50	16	844	121	37	32	52	47	54	585	2406	259	109	11	273	18
BROCKWAY																									
6 Mo. '46				14		47	3	4	1			9	47	1				7	40	76	19	1		1	
'45				16		71	4	13	5			25	121	3		5		13	64	157	12	1			
'44				8		22	3	2				2	17					9	52	105					
'43	1			3					1	1									3	1					
'42				3		9	2						2		2			3	27	26	2		1	1	
'41				20		125	4	18				2	2		1	1	5	23	77	185				1	
'40				2		59	2	3				4	1		1	1		18	37	94				1	
'39				3		78	4	13				3				2		7	58	121		2		1	
'38				3		62	2	10				1						5	38	85					
'37		1		22		46	3	5	1			2						6	49	111	1			1	
'36	1	1		4		44	3	4	2	1		1	1					9	40	85	3				
'35			1	2		13	1					3	2			2		4	13	71				1	
'34				4		18			1			1	3				2	2	12	44					
'33				3	1	8						1	2					3	5	19	1	7			
Before '33				22		72	2	1	1	4		8	1	2	3		1	11	32	58	3	1		6	
Unid.*						2		4					2						3	1	20				
Total	2	2	1	129	1	676	33	75	12	6		62	201	6	7	11	8	120	548	1239	61	12	1	13	
CHEVROLET																									
6 Mo. '46	1903	131	1439	2535	431	625	230	213	1147	1839	549	3213	1184	1663	1475	1424	1274	588	901	1029	1879	1162	1400	1478	338
'45	1098	240	1023	2655	302	351	39	14	863	1227	240	1706	849	978	1082	1069	765	383	153	571	1169	486	850	1659	337
'44	607	111	531	1233	305	136	15	8	352	544	163	786	88	546	514	451	302	292	58	235	548	340	455	626	101
'43	35	88	22	231	11	5		1	36	70	14	30	8	15	25	42	44	12	8	10	24	3	37	21	31
'42	3288	590	2501	4339	1580	608	294	187	2524	3083	875	3176	2074	1921	2108	1739	2201	902	1148	948	2549	1662	2486	1958	988
'41	4873	1201	4405	12909	2654	2355	739	717	4326	5602	1601	9595	5004	4771	5926	4050	3769	1989	2892	3474	5803	4125	4104	7376	2927
'40	3658	958	3204	9531	2288	1998	631	496	2994	3881	1417	8809	4476	4261	4018	3609	3215	1697	2472	3388	4359	3702	3541	6507	1827
'39	2873	801	2634	7333	2091	1645	485	390	2577	3099	1057	6686	3952	2675	3269	2924	2487	1330	1820	2760	3280	2678	2489	5215	1246
'38	1630	594	1703	5785	1463	1010	323	193	1710	1712	757	4304	2525	2437	3483	2041	1419	988	1210	1803	1987	2322	1706	3527	948
'37	2818	1179	2688	9283	2542	2106	612	295	2458	2943	1353	6767	4011	3508	4369	3075	2500	1632	2396	3138	4512	3793	2723	5677	1315
'36	2350	935	2430	8825	2750	2012	494	207	2276	2840	1479	6474	4497	3584	4665	2614	2341	1489	1945	2829	3872	3820	2145	5930	1490
'35	1340	691	1428	6589	1496	1290	250	96	1199	1910	1048	3410	3715	2460	2945	1503	1302	971	979	1518	2411	2893	1193	3418	1127
'34	871	492	1134	5659	1501	1203	255	68	1347	1080	959	2813	1968	1912	2681	1055	899	715	999	1241	1588	2554	842	2753	1027
'33	484	245	800	3619	753	777	137	31	689	854	332	1234	1180	845	1350	616	507	442	536	641	748	1340	479	1510	390
Before '33	1432	816	3018	13443	3112	2757	378	41	2997	3158	1259	4332	4883	3794	8091	1818	2118	1412	1478	1241	2492	6331	1588	5354	1982
Unid.*	130	13	91	14	23	7	33	289	366	315	27	332	50	48	269	45	620	12	178	25	6375	62	267	470	44
Total	29590	9085	29051	93983	23302	18885	4895	3246	27861	34157	13130	63667	40444	36418	46270	28075	25763	14854	19173	24851	43594	37273	26285	53479	18219
DIAMOND T																									
6 Mo. '46	20	7	21	97	27	39	2	6	39	35	13	270	59	91	58	37	36	1	19	39	59	47	20	83	9
'45	37	5	21	124	38	56	3	4	49	20	21	335	111	106	82	81	41	4	34	104	83	71	21	88	27
'44	24	2	18	54	26	16	3	1	22	10	10	176	57	66	45	22	37	5	28	58	64	29	15	43	15
'43		1		17					1	1	1	7	1			4	9		1	2	1	2		1	
'42	10	5	17	52	14	20	2	3	28	6	15	89	33	68	42	21	73	4	23	54	31	31	23	21	7
'41	37	10	19	413	67	131	4	17	112	50	32	820	169	167	154	58	142	11	70	280	146	103	34	178	55
'40	46	7	23	227	71	128	3	3	109	37	34	927	124	230	120	80	109	11	44	215	129	145	31	193	43
'39	17	2	20	158	81	77	6	4	37	15	27	635	126	176	100	60	88	13	72	214	69	130	15	133	36
'38	4	6	33	145	73	68	4	4	38	14	35	471	74	120	147	59	30	19	61	140	60	121	7	117	27
'37	10	13	48	257	182	149	7	11	64	32	49	760	210	198	236	102	64	22	85	213	94	213	11	233	58
'36	6	7	13	301	145	113	4	11	40	23	47	786	187	175	170	61	35	11	75	157	55	231	12	212	77
'35	2	4	5	159	91	100	1	11	39	9	33	441	183	132	134	59	23	10	25	154	38	170	4	109	96
'34	1	2	4	74	53	59	1	4	18	5	12	387	100	94	89	37	15	14	20	93	20	121	1	117	50
'33		2	1	32	34	32	1		11	2	3	322	76	60	42	34	12	8	18	49	4	73		92	11
Before '33			8	101	16	73	2	17	19	5	3	903	99	56	61	49	10	21	28	80	28	128	1	205	9
Unid.*			1	1	3				11	7	1	43	1	18	7	7	20		1	3	220	2	3	17	
Total	214	73	252	2212	921	1061	43	96	637	271	336	7352	1610	1757	1487	771	744	154	604	1855	1101	1617	198	1812	520
DIVCO																									
6 Mo. '46	19			93	5	32	2	18	32	12	9	88	38	18	11	9	15	21	12	155	70	21		103	1
'45	6	6		125	11	63	2	22	2	6	2	110	49	8	8	9	5	5	18	126	161	12		62	
'44				7		4	1			2		17	8	1	3	7	6		7	26	14	2			
'43				3					1		2				2				1	3	1	1			
'42	5	3		40		5	5	22	12	1		15	38	4	16	2	6	5	29	43	37	3		8	1
'41	6	9		145	12	122	7	26	7	3	2	158	46	9	6	22	8	28	45	377	230		1	115	
'40	5	2	1	54	18	41	3	57	4	4		107	49	11	5	10	7	9	24	126	97	17		40	
'39	2	4		58	1	76	4	58	4	1		76	39	9	1	5	2	3	26	133	24	21		48	
'38	2	7		25		28	3	51	1	10		54	12	8	2	4	2	1	20	57	18	16		35	
'37	2	9		7		48	2	35	18	2		98	18	8	6	15	2	3	14	34	14	19	1	38	
'36	5	1		42	1	16	2	84	1	2		113	11			13	13	4	16	44	8	84		21	1
'35	2			13		6	1	8				12	2	3		4	1	1	8	11	13	65		5	
'34				8		5		9			2	40	1	1		2		1	3	10	10	7		1	
'33				4		3						18	3			4			1	12	1	14			
Before '33				111	1	6	1	9	1			84	7	2	10	4		1	5	29	5	7		11	
Unid.*		1	1		7							2	1			2	5				106			1	
Total	54	42	2	735	56	457	33	379	83	43	17	992	322	82	70	112	71	82	230	1186	809	279	2	488	1

Source of data—R. L. Polk & Co.

Unid.*—Unidentified as to year of manufacture.

. . . By Year of Manufacture

98 INTERNATIONAL . p. 98 — REO . . . . . p. 100 — WHITE . . . . . p. 100
98 MACK . . . . . 98 — STUDEBAKER . . . . 100 — WILLYS-OVER. . . . 100
98 PLYMOUTH . . . . . 100 — and a SUMMARY on page 100

Model		Neb.	Nev.	N. H.	N. J.	N. M.	N. Y.	N. C.	N. D.	Ohio	Okla.	Ore.	Pa.	R. I.	S. C.	S. D.	Tenn.	Tex.	Utah	Vt.	Va.	Wash.	W.Va.	Wis.	Wyo.	Total
AUTOCAR	6 Mo. '48		4	10	155		165	42		73	2	8	179	56	5		5		3	1	41	11	10	7	1	1412
	'45			5	206		375	44		132	18	28	257	50	12	1		3		2	39	14	10	47	1	2175
	'44		1	1	121		141	27		79	9	5	225	31	1	2		4			20	1	8	3		1176
	'43				8		10			1			31	1										3		87
	'42			3	61		42	1		29		1	245	12	2		1	1	1	1	3	3	1	4		617
	'41		1	1	8		310	392	31		130	6	2	402	77	3		3	1		2	35	5	16	13	1	2511
	'40	1	4	8		154	2	308	23	2	134	1	3	199	38	3		1	1			28	2	10	6	2	1575
	'39		1	5		204		393	11		89	1	1	359	33	2		1	1	1	2	25	3	8	9		1758
	'38	1		3		151		257	6		53	1	4	285	38	2			1		1	14		6	3		1318
	'37			6		242		429	4		102	2	1	292	35						2	16		7	16		1725
	'36			1		169		318	2		45		1	169	14					1	1	6		2	16	1	1156
	'35					82		210			21			87	15					1	4	5			1		664
	'34	1		4		75		257	1		33	3		191	14				1		2	4		14	5		887
	'33			1		74		189	1		25	2		151	11				1		3			1	1		684
	Before '33	3	3	1		198	1	591	6	5	39	11	5	465	35	1	3			3	1	19	13	5	15		2373
	Unid.*					11		17			2		4	2				1				1					128
	Total	6	14	58		2221	3	4094	199	7	987	56	63	3539	458	31	6	12	14	10	22	256	52	98	149	6	20203
BROCKWAY	6 Mo. '48			2		180		379	2		18		1	224	1	1		1	1		5	23		1			1109
	'45	1		4		287		868			25			311		1		2			8	23		15			2053
	'44					178		404	2		6			336							3	7		11			1167
	'43					6		8						30											1		57
	'42		1			30		115			1			231	2	1		1			1	8		2	1		472
	'41		10	10		324		1213	1		6			339	4	1		2			11	34		1			2420
	'40			4		176		823	1		7			187							13	31		4			1469
	'39			6		169		674	4		7			346	2						10	23	2	3			1736
	'38			4		145		753	2		1			234	1						11	32					1389
	'37			1		163		660			2	1		276	2						6	18		1			1578
	'36			2		163		867			2			236							4	4					1477
	'35			5		74		484			1			87	1						1	4	1	2			773
	'34			6		70		401			1			73	2						1	2		1			644
	'33			3		22		186	1					32							3	1					297
	Before '33			1		154		862			2			165	1		1	2	2		7	11		1	3		1441
	Unid.*					15		23						4													74
	Total	1	11	48		2158		9118	13		81	1	1	3111	18	4	1	8	3		84	221	3	42	5		18188
CHEVROLET	6 Mo. '46	578	91	294		1357	477	2172	2151	101	2324	1074	741	3670	195	715	369	1758	4898	430	123	1209	848	359	1159	268	57407
	'45	222	54	170		704	186	1823	1046	211	342	1246	418	182	154	675	159	798	1541	140	145	1399	480	307	988	130	33489
	'44	140	23	58		303	128	857	687	138	60	656	306	124	50	498	132	470	784	93	72	760	334	258	543	98	17117
	'43	9	1	2		12	3	33	12	38	104	51	47	27		5	2	25	47	5	8	13	27	38	5	6	1339
	'42	1549	190	109		1403	733	3273	3505	790	4147	1532	1555	5171	166	1683	547	2615	10568	486	191	2548	1859	1341	2053	510	94234
	'41	2519	344	812		5112	1268	11616	6734	1721	6497	5391	3063	18092	765	3603	1168	5157	15224	1012	653	5638	4295	3111	5389	826	211017
	'40	1915	336	799		4716	1060	10340	4634	1586	7131	3971	2212	9050	702	2552	1105	3708	11888	881	568	4076	2871	2985	4624	742	171385
	'39	1833	223	877		3615	1003	7962	3916	1159	5202	3793	1676	6558	641	1964	896	2813	10807	843	425	3511	2377	2299	3607	585	137361
	'38	1439	150	487		2756	706	5912	2989	986	3393	2675	1076	4349	366	1224	662	1887	6876	518	326	2446	1726	1550	2492	397	94968
	'37	1777	292	782		4642	1190	9667	3850	1395	7214	4302	2573	5875	676	1979	888	2748	11743	905	504	3785	3481	2863	5032	622	159476
	'36	2235	237	729		3672	942	8152	3058	1259	6062	4144	2493	7289	649	1605	1087	2414	9761	991	494	3384	3483	2485	4577	674	146167
	'35	1373	172	476		2109	538	4866	1868	1328	3288	2691	1549	3556	440	1069	926	1631	5067	644	389	1743	2108	1113	3116	430	89672
	'34	1460	134	425		1997	421	4169	1846	1169	3165	2106	1406	3785	290	800	828	820	4258	561	216	1524	2079	948	2650	378	75049
	'33	655	42	228		1188	114	2395	820	505	1410	1041	750	2001	178	400	325	519	2209	213	107	755	1110	452	1193	153	39282
	Before '33	5201	261	793		3206	378	7269	1653	3997	5062	3284	2816	5208	397	1091	2644	2084	8784	528	351	2013	4318	1028	8164	589	150442
	Unid.*	24	17	6		167	11	166	14	4	41	121	47	299	5	16	19	299	222	3	3	50	16	8	24	1	1168 8
	Total	22929	2567	7047		36959	9136	80592	38781	16387	57442	38078	22748	71036	5674	19879	11757	29742	104673	8251	4552	34854	31412	21145	45496	6406	1490093
DIAMOND T	6 Mo. '48	43	1	1		85	13	213	28	1	94	10	63	165	7	10	24	31	97	3	3	33	64	8	80	13	2194
	'45	75	1	1		109	12	291	15	24	150	16	72	302	18	19	35	26	149		2	52	67	34	147	21	3204
	'44	35		2		68	14	173	13	17	78	38	4	284	11	15	23	4	72	1	5	35	33	21	77	11	1880
	'43							2			1	2	7	37	1				2			4	4			3	112
	'42	26	7			40	4	153	20	3	65	13	31	268	2	6	5	21	92	2	7	19	53	19	23	5	1576
	'41	106	5	8		260	13	1037	47	9	321	31	35	550	41	11	30	32	231	11	21	86	130	73	248	19	6634
	'40	101	1	10		228	11	775	44	21	246	35	33	290	34	18	40	37	200	8	21	54	115	80	206	12	5709
	'39	55		6		185	18	626	21	13	166	27	37	688	43	6	35	19	127	6	15	40	61	39	184	10	4736
	'38	44	2	10		171	22	464	20	30	145	27	45	506	21	4	23	12	142	6	4	16	60	34	182	15	3882
	'37	77	19	8		318	35	853	20	42	253	57	74	575	38	4	46	61	230	17	12	19	96	115	348	34	6672
	'36	93	11	6		443	24	830	35	48	228	52	65	386	26	13	43	44	123	13	6	50	98	73	272	10	5926
	'35	104	1	7		176	7	572	23	49	155	27	66	146	17	5	32	19	81	11	12	17	76	58	175	13	3881
	'34	87		8		124	4	382	9	29	112	18	24	155	13	3	22	8	47	10	10	17	44	20	93	10	2649
	'33	46		9		76	1	302	8	6	49	10	4	170	7		15	1	22	3	4	12	27	5	102	1	1799
	Before '33	45	1	9		181	4	609	3	21	73	8	9	147	9	2	39	8	24	1	4	11	33	15	274	2	3454
	Unid.*	2				21	1	12	1		4	2	4	8		1		11	5				2	1	4		445
	Total	939	49	85		2485	181	7294	307	313	2140	373	573	4877	288	117	412	334	1644	92	126	465	963	595	2415	179	54744
DIVCO	6 Mo. 46	1		6		107		65	17		76	23	19	47	21	2	6	14	27	13	2	32	25	7	38	3	1335
	'45	1		7		132		117	9	1	130	11	11	68	23	1	4	5	54	7	4	33	25	15	38	3	1517
	'44	1				14		7	2		10	2	7	71	2			1				15		3			239
	'43					14								6	3												37
	'42	3		2		32		31	7		32	7	4	279	15	2	2		3			19	4	6	24		772
	'41	11		5		209		216	36		206	12	13	333	51	10	3	17	25			61	44	27	32		2695
	'40	9		3		175		342	30		99	2	8	84	65	8	3	12	16	1	2	30	14	22	32		1648
	'39	3		4		104	1	260	18		123	6	3	168	30	3	2	11	46	7		18	28	10	34		1477
	'38	3		2		43		401	27	1	70			145	10	5		8	13	2		20	14	10	18		1148
	'37	5		1		61		253	24		56	9		103	13	4	1	5	27	6		18	10	11	25		1025
	'36			1		105		84	12	1	64			39	1		3	6	19			16		8	13		834
	'35					50		32	2		16			22	14		5	7	4			11	1	4	8		321
	'34					25		30	4		15			8	4			2				1		8	5	1	203
	'33					17		18	2		2			5	4			5				1	20	2	11		147
	Before '33					57		61		1	24	1		24	4			2	2				2	5	28		508
	Unid.*					1		2				1		9				1									140
	Total	37		31		1146	1	1919	190	4	923	74	65	1412	260	35	29	96	236	36	8	275	187	138	306	7	14044

Source of data—R. L. Polk & Co.

Unid.*—Unidentified as to year of manufacture.

Continued on Page 98

TRUCKS IN USE . . . By Makes . . . By States . . .

Continued from Page 97

Model		Ala.	Ariz.	Ark.	Calif.	Colo.	Conn.	Del.	D. C.	Fla.	Ga.	Idaho	Ill.	Ind.	Iowa	Kan.	Ky.	La.	Me.	Md.	Mass.	Mich.	Minn	Miss.	Mo.	Mon
DODGE	6 Mo. '48	1128	116	837	2967	388	599	105	135	1032	1182	335	2880	1039	1182	807	824	856	446	780	892	2174	1195	869	1162	258
	'45	326	119	280	1480	182	257	11	61	431	449	115	1135	664	458	425	420	297	154	78	479	738	393	249	835	168
	'44	144	39	138	527	67	90	24	17	142	167	50	369	224	175	143	137	130	75	182	128	247	147	97	190	51
	'43	8	22	4	173	5	1	.....	.....	17	22	10	13	5	3	6	1	16	10	3	7	19	2	6	10	1
	'42	925	258	868	2475	454	230	84	99	1048	1024	246	1039	782	582	576	530	830	339	483	614	1247	535	656	725	196
	'41	2020	617	1217	6324	1119	1086	137	366	2480	2609	681	3241	1851	1284	1353	1279	1340	636	1019	2132	2810	1189	1308	1901	714
	'40	1041	321	725	3817	609	700	107	246	1238	1470	412	2842	1550	988	872	1021	791	449	798	1640	1770	962	708	1477	370
	'39	765	215	578	2739	630	665	100	220	779	956	288	2436	1529	928	722	797	585	419	754	1537	1451	816	424	1204	339
	'38	410	133	340	2281	477	432	66	120	559	468	178	1425	816	632	652	625	395	301	489	871	854	545	230	800	233
	'37	686	302	533	4720	886	686	120	180	827	943	310	2477	1938	884	882	1100	566	381	899	1241	1785	1010	455	1251	352
	'36	736	510	694	5957	1298	992	142	188	1137	962	638	3188	2510	1287	1402	1297	643	549	1067	1512	2238	1467	454	1836	642
	'35	239	252	314	3864	588	662	60	83	510	383	425	1388	1845	696	688	690	241	235	450	828	919	976	160	828	485
	'34	210	127	226	2122	322	443	59	35	349	250	286	857	816	413	461	387	187	264	443	632	684	468	98	618	255
	'33	53	47	69	1080	172	240	20	15	139	83	118	397	380	189	217	178	37	111	149	217	208	242	30	357	106
	Before '33	125	137	307	4129	584	804	34	8	247	194	188	613	774	351	813	318	183	264	253	291	604	665	103	785	315
	Unid.*	42	3	41	10	12	3	8	118	155	97	10	168	20	17	66	21	144	6	57	16	3368	24	69	152	5
	Total	8858	3213	7191	44625	7791	7890	1057	1874	11090	11259	4290	24448	16523	10029	10085	9825	7221	4639	7904	13037	21116	10636	5914	14131	4465
FEDERAL	6 Mo. '48	14	2	18	65	2	52	1	2	30	21	15	96	25	38	22	30	32	11	29	33	83	39	16	52	2
	'45	18	13	30	68	6	53	2	6	10	24	19	86	73	33	19	49	12	13	55	35	99	88	15	61	1
	'44	5	1	3	22	12	10	.....	2	8	10	3	33	20	5	2	7	6	10	13	25	35	42	9	7	5
	'43	2	1	.....	27	.....	.....	.....	.....	7	5	1	2	2	.....	.....	1	4	.....	1	.....	.....	.....	4	1	.....
	'42	5	.....	5	22	30	25	.....	2	13	19	1	20	11	3	12	16	19	1	16	25	53	34	9	14	.....
	'41	3	.....	5	58	2	52	2	19	23	11	2	117	29	8	1	22	16	6	36	69	95	40	5	21	4
	'40	1	1	6	54	5	64	.....	10	68	12	1	114	32	4	2	20	8	8	24	70	74	28	.....	33	4
	'39	1	3	1	71	1	51	1	6	22	11	2	89	28	8	7	17	3	9	32	76	80	30	1	17	.....
	'38	.....	1	.....	49	5	46	.....	6	18	15	1	76	14	9	2	22	3	7	21	56	56	29	.....	34	9
	'37	2	.....	6	76	10	68	1	4	27	14	2	146	28	11	5	28	2	5	30	92	115	47	4	66	11
	'36	2	1	5	114	16	69	2	3	18	28	2	151	28	12	16	19	4	2	32	76	118	39	2	72	13
	'35	3	.....	.....	79	5	64	.....	1	13	3	1	82	10	7	5	24	1	2	19	45	83	21	1	56	20
	'34	.....	.....	4	77	6	45	.....	2	9	6	3	54	18	1	5	8	.....	2	9	48	60	28	1	49	2
	'33	1	.....	1	23	1	28	.....	1	4	3	1	37	6	1	3	8	.....	.....	5	17	16	19	.....	28	.....
	Before '33	1	2	2	233	10	131	2	2	9	5	10	75	18	20	8	33	5	7	36	70	85	42	3	112	7
	Unid.*	.....	.....	2	1	.....	1	.....	1	4	.....	.....	5	.....	1	1	6	5	1	1	1	411	2	1	5	.....
	Total	58	25	88	1037	111	759	11	67	283	187	64	1183	340	161	110	310	120	82	359	738	1463	528	71	628	78
FORD	6 Mo. '48	1710	180	1965	3515	585	452	164	127	1749	2504	452	2827	918	1432	1143	1125	1587	472	660	912	2853	981	1560	1550	289
	'45	881	222	1036	2745	452	441	71	180	1138	1842	235	1983	1680	1159	857	1038	1153	488	283	908	1998	1108	946	1349	254
	'44	397	86	420	804	287	162	51	38	498	892	123	853	482	467	425	438	562	290	212	439	633	492	647	409	130
	'43	85	50	35	411	13	35	8	1	74	164	20	88	19	36	89	35	56	10	32	48	56	6	28	56	11
	'42	2383	365	2104	2798	989	473	134	258	2810	3405	400	2295	1216	1287	1276	1158	2773	822	532	1259	2117	1346	2778	1171	563
	'41	3985	1033	4598	10515	2085	1837	462	586	5143	6015	1168	7578	3977	4121	4260	3255	4302	1812	1835	3939	7194	4042	3841	5110	1437
	'40	2778	599	3224	7072	1725	1435	358	452	3592	3871	960	6465	3335	3420	2865	2237	3316	1460	1434	3041	4762	3170	3255	4166	1133
	'39	1927	511	2444	5387	1588	1054	239	356	2525	2790	784	4640	2772	2893	2152	1849	2396	1148	961	2494	3272	2344	1935	2922	904
	'38	1199	461	1468	4492	1282	881	205	225	2099	1796	640	3594	1815	2107	2476	1371	1736	935	818	1781	2203	2255	1427	2142	976
	'37	2395	748	3081	8973	2446	1849	407	348	3439	3450	1137	6408	4182	3257	4065	2772	2734	1771	1619	3570	5431	3949	2492	4375	1260
	'36	1900	686	2393	9112	2590	2001	422	329	3175	3095	1210	6163	4032	3074	3528	2313	2449	1449	1680	3590	5265	3693	1841	3941	1412
	'35	992	704	1429	9332	1880	1591	294	223	2095	1723	957	4278	3914	2592	2889	1513	1138	1090	1182	2736	3469	3199	974	2992	1206
	'34	713	464	1012	6389	1285	1406	251	126	1833	1331	715	2549	1808	1470	2035	1078	934	1060	1007	2189	2717	1959	721	1903	867
	'33	102	177	248	3390	491	577	51	47	594	309	263	959	643	576	671	448	189	314	207	684	610	955	177	678	394
	Before '33	2921	2262	6259	39526	6468	6849	786	323	10383	7872	2378	8797	10086	7356	12396	4813	5663	3638	3141	4898	8678	12527	3618	11040	3345
	Unid.*	125	8	148	19	20	9	31	488	639	478	14	342	65	32	145	42	679	13	124	45	10342	144	230	392	24
	Total	24553	8554	31862	114478	24188	20852	3934	4085	41784	41337	11456	59819	40904	35279	41272	25483	31667	16770	15727	32513	61598	42170	28470	44197	14225
G. M. C.	Mo. '48	127	3	109	458	31	69	25	19	180	145	90	311	147	142	85	89	55	26	86	120	204	120	77	159	27
	'45	232	96	170	1127	149	183	66	25	322	190	79	577	350	301	212	250	104	98	228	238	570	193	159	389	93
	'44	160	52	116	513	78	61	38	17	114	107	41	451	254	99	101	106	51	91	119	208	348	156	101	224	54
	'43	28	22	10	172	16	4	7	.....	19	26	8	17	15	11	11	28	17	5	28	33	23	9	22	31	3
	'42	699	116	567	1424	430	183	82	58	680	554	218	680	581	431	381	422	376	235	280	367	497	447	602	361	164
	'41	992	230	760	4280	592	794	164	263	756	964	331	2198	1300	659	896	814	572	324	582	1344	1473	788	768	1420	337
	'40	524	148	563	3241	467	629	106	204	504	724	243	1888	1119	501	629	669	413	233	371	946	1031	752	566	1059	253
	'39	286	113	364	2618	358	423	130	162	356	502	178	1205	877	331	524	422	315	174	447	848	593	509	315	922	160
	'38	178	78	169	1693	200	259	76	106	244	305	101	823	348	182	434	305	254	126	262	427	319	245	236	433	114
	'37	377	221	429	3302	696	713	115	147	480	441	290	1680	1143	431	1084	885	273	276	402	1096	944	624	384	1047	243
	'36	95	79	154	1994	331	384	55	77	238	205	214	757	581	237	439	363	103	152	194	590	521	425	127	633	110
	'35	26	25	23	843	70	165	17	15	70	59	30	271	159	36	73	93	30	34	58	233	197	85	26	134	30
	'34	15	10	17	543	63	137	16	24	47	21	34	164	84	36	73	58	12	28	57	153	96	79	8	105	22
	'33	3	7	3	315	26	64	8	10	4	12	7	102	49	16	33	22	7	5	29	84	51	21	2	68	10
	Before '33	23	42	20	1022	133	318	27	16	42	22	48	281	230	94	249	93	43	46	96	265	163	190	26	252	77
	Unid.*	22	4	20	3	3	6	4	45	68	104	7	116	20	14	25	25	98	3	22	23	1543	4	50	84	2
	Total	3787	1246	3494	23548	3643	4392	934	1188	4124	4381	1919	11321	7257	3521	5249	4642	2723	1856	3241	6975	8573	4645	3467	7321	1715
International	6 Mo '48	827	59	536	1540	237	358	55	121	513	753	224	2075	857	1008	667	738	556	262	272	582	789	993	512	642	207
	'45	374	109	310	1120	277	298	68	36	388	483	203	2000	1382	795	429	690	405	217	331	813	760	477	346	724	212
	'44	298	68	196	786	141	102	47	23	177	324	75	931	574	448	347	323	265	134	229	326	365	279	219	391	118
	'43	20	31	21	149	6	11	9	1	33	38	20	157	56	25	29	17	26	5	38	22	16	7	30	10	7
	'42	761	98	667	754	281	283	86	48	749	754	233	1221	689	710	523	554	620	286	419	312	454	725	664	344	237
	'41	1367	335	1115	4248	974	1407	219	320	1578	1887	699	6111	3378	2751	2346	1742	1575	602	1066	2123	1989	2212	1194	3048	1025
	'40	1055	278	947	3464	917	1193	140	212	1196	1476	595	4884	2576	2489	1783	1536	1332	430	682	1590	1725	2233	1065	2373	898
	'39	1012	236	950	2620	642	981	185	148	910	1261	469	4140	2315	1786	1223	1239	1235	322	897	1403	943	1741	985	1900	730
	'38	581	225	585	2519	547	837	153	155	813	724	386	3205	1674	1472	1646	1178	914	324	738	956	702	2875	753	1613	791
	'37	606	309	455	3235	990	877	166	139	954	647	648	3514	2140	1838	1692	1259	710	213	805	937	755	671	690	1870	620
	'36	733	294	671	2962	1093	984	112	89	866	933	727	3554	1968	1555	1583	1219	958	353	544	999	832	1462	885	1623	790
	'35	326	231	361	2107	599	686	64	65	471	449	425	1967	1383	994	950	716	460	182	310	482	573	1058	446	1084	782
	'34	122	104	125	887	187	359	45	33	285	160	168	819	511	492	391	266	203	114	213	321	214	504	146	478	345
	'33	37	44	58	513	117	258	26	17	110	70	83	585	322	319	297	190	102	65	129	148	112	332	66	379	250
	Before '33	97	66	123	1273	350	466	46	22	153	186	189	1604	921	1169	1783	389	287	139	229	379	408	1458	152	739	919
	Unid.*	42	5	66	4	9	1	7	77	112	97	8	211	33	37	65	37	334	6	31	16	2298	20	107	176	19
	Total	8258	2492	7188	28181	7367	9101	1428	1508	9306	10223	5152	37008	20759	17888	15754	12073	9982	3654	6933	11409	12935	17047	8280	17404	7950
MACK	6 Mo. '48	49	8	15	85	2	76	4	5	185	80	5	89	19	79	11	68	49	27	35	77	31	64	26	517	1
	'45	48	4	8	125	23	88	10	10	139	139	9	167	77	110	16	17	78	49	80	299	64	106	62	315	1
	'44	68	3	2	81	13	43	7	9	137	115	6	130	40	44	9	7	29	46	58	142	24	36	9	28	3
	'43	4	.....	.....	4	.....	7	1	.....	11	9	.....	19	10	1	.....	4	2	4	11	24	3	27	3	2	.....
	'42	51	1	5	108	12	77	10	3	332	112	.....	113	40	23	6	44	68	27	77	166	40	58	35	9	1
	'41	67	5	9	458	30	469	25	56	380	174	4	352	137	37	22	111	60	92	216	686	59	188	20	85	3
	'40	50	8	13	479	22	326	16	23	126	114	10	357	95	74	24	88	40	80	132	483	57	107	18	74	1
	'39	23	6	10	329	21	238	19	14	116	53	7	296	99	44	14	51	22	54	149	361	40	95	10	53	1
	'38	11	2	3	278	20	134	11	7	107	41	2	143	45	16	8	43	28	40	89	289	15	60	8	28	.....
	'37	12	7	6	270	32	328	12	17	103	49	10	222	57	24	7	44	30	35	98	253	33	54	11	60	2
	'36	5	1	2	190	7	220	9	10	28	14	4	166	41	25	6	40	22	14	68	193	38	62	3	70	1
	'35	4	.....	1	75	3	43	2	1	22	10	2	56	8	15	2	10	9	15	20	163	19	23	1	6	2
	'34	3	.....	1	48	1	49	2	1	5	4	.....	49	2	7	6	13	4	14	22	125	28	19	.....	9	7
	'33	1	.....	.....	56	1	30	1	3	.....	4	.....	35	5	3	.....	8	3	19	18	68	13	15	2	5	3
	Before '33	22	13	6	1164	38	385	28	19	124	65	17	1109	85	93	27	37	65	41	210	580	177	178	11	177	12
	Unid.*	8	.....	1	.....	.....	3	1	16	36	19	1	22	1	2	.....	1	25	2	9	11	258	2	3	12	.....
	Total	426	58	82	3750	225	2514	156	194	1851	1002	77	3325	761	598	158	586	534	559	1292	3910	895	1094	222	1450	39

Source of data—R. L. Polk & Co.

Unid.*—Unidentified as to year of manufacture.

. . . By Year of Manufacture . . . As of July 1, 1946

Model		Neb.	Nev.	N. H.	N. J.	N. M.	N. Y.	N. C.	N. D.	Ohio	Okla.	Ore.	Pa.	R. I.	S. C.	S. D.	Tenn.	Tex.	Utah	Vt.	Va.	Wash.	W.Va.	Wis.	Wyo.	Total
DODGE	6 Mo. '46	385	13	219	1288	308	2368	1290	55	2186	758	691	4144	161	522	295	1219	3132	284	138	901	804	358	935	155	46898
	'45	225	30	96	467	92	1268	470	166	1037	685	290	74	95	313	201	323	1591	63	79	568	288	229	442	76	19347
	'44	83	13	15	135	42	450	193	58	324	201	87	1148	31	107	61	121	556	19	37	206	129	131	189	37	8071
	'43	2	8	3	3	5	17	2	11	3	12	5	10	2	2	1	6	22	3	2	5	12	4	2	2	508
	'42	242	64	67	800	200	2151	1245	259	1564	873	702	2495	69	784	223	967	3506	221	88	1079	1037	535	596	179	38766
	'41	493	139	290	2217	420	5138	2587	451	3901	1759	1445	4678	314	1422	356	1659	6149	380	290	2357	1979	1230	1520	323	82168
	'40	315	94	292	1528	249	3829	1977	382	3053	1115	878	3890	237	718	305	1055	3177	269	253	1372	1145	951	1369	173	55550
	'39	363	62	285	1461	245	3995	1234	292	2589	706	492	3640	273	524	251	792	2217	255	196	975	945	777	1088	192	45705
	'38	279	41	169	1206	164	3463	630	196	1623	592	315	2133	134	281	190	569	1714	102	118	664	592	557	761	113	30938
	'37	354	101	265	1767	259	3935	961	340	3161	951	861	4456	263	504	275	927	2380	269	208	880	1121	807	1494	227	52160
	'36	700	152	324	2327	287	5322	1300	402	3886	1214	1399	5057	356	497	401	1181	2709	503	236	1175	1998	1278	2126	279	68433
	'35	394	67	172	987	140	2738	735	306	1856	634	672	2124	189	229	284	453	1065	294	135	577	1115	587	1163	159	34684
	'34	225	46	144	782	95	1975	456	187	1241	392	443	2376	144	187	146	299	715	170	101	382	780	428	597	111	23432
	'33	119	11	44	348	20	832	131	123	536	176	209	754		69	78	69	228	60	17	180	345	154	301	35	9727
	Before '33	548	103	90	679	42	1380	140	231	747	352	597	1158	141	96	268	264	651	108	73	179	996	185	949	95	23161
	Unid.*	10	5	3	87	1	87	3	1	16	41	26	214	1	8	4	148	98	4	1	13	2	1	17	6	5431
	Total	4737	1067	2478	16082	2569	38946	13354	3460	27723	10461	9112	38351	2464	6263	3339	10052	29910	3004	1972	11513	13286	8212	13549	2162	542977
FEDERAL	6 Mo. '46	12	1	6	75	5	122	38	.....	126	21	44	118	3	10	1	61	47	5	8	28	12	25	23	2	1523
	'45	13	5	11	139	.....	246	49	.....	226	56	121	180	2	9	2	29	61	6	2	64	20	39	42	2	2212
	'44	3	1	3	42	1	79	26	3	88	10	54	65	2	6	3	26	17	4	.....	25	12	6	24	.....	795
	'43	3	.....	2	2	.....	1	3	.....	3	.....	9	9	.....	6	.....	8	15	.....	.....	5	16	.....	.....	.....	140
	'42	6	.....	1	48	1	70	9	.....	57	20	57	61	2	15	1	21	18	1	1	25	20	18	6	1	814
	'41	.....	.....	4	117	3	166	13	5	119	14	130	110	7	11	.....	63	20	3	1	46	26	16	14	2	1534
	'40	1	.....	4	98	.....	226	8	1	102	6	42	54	19	5	.....	29	4	1	4	18	3	14	9	.....	1289
	'39	1	.....	3	80	1	143	14	.....	91	11	34	116	14	10	.....	58	7	3	2	18	10	15	20	.....	1218
	'38	4	.....	2	76	2	104	11	3	115	4	35	71	14	4	.....	32	6	1	2	15	11	12	16	.....	1019
	'37	8	1	3	94	.....	147	9	3	71	20	71	108	21	12	.....	41	15	.....	5	7	21	21	24	.....	1500
	'36	5	.....	4	105	1	195	8	4	92	14	74	107	32	3	2	46	21	6	2	11	24	34	41	1	1676
	'35	7	2	3	94	.....	113	1	2	43	11	46	38	14	2	1	36	18	4	1	4	17	7	25	.....	1034
	'34	9	.....	1	43	2	132	1	1	27	3	51	34	35	.....	1	17	6	1	3	13	12	4	24	.....	857
	'33	1	.....	1	18	.....	65	.....	.....	13	.....	29	33	22	1	.....	7	1	.....	1	5	8	3	11	1	423
	Before '33	3	2	7	158	2	194	1	4	61	20	103	83	61	5	5	34	15	.....	7	16	37	2	49	.....	1797
	Unid.*	.....	.....	.....	3	.....	9	.....	.....	2	.....	1	3	.....	.....	.....	9	1	.....	.....	.....	1	.....	.....	.....	478
	Total	76	12	55	1192	18	2012	191	26	1236	210	901	1190	248	99	16	517	272	35	39	300	250	216	328	9	18309
FORD	6 Mo. '46	404	106	235	1379	344	2458	1509	104	1514	1106	876	3672	184	908	237	1723	5194	381	188	1459	1070	471	1432	237	58903
	'45	579	56	192	1026	124	2729	1472	206	2432	1590	419	1044	162	757	273	758	3716	158	180	1407	676	413	819	165	45594
	'44	270	11	92	422	82	791	650	98	537	508	183	1169	59	398	128	287	1533	82	91	655	266	272	540	93	19428
	'43	18	10	2	205	8	88	101	33	44	93	21	42	2	16	5	34	277	27	2	47	66	24	21	14	2669
	'42	802	154	128	1133	411	2722	2447	602	2157	1788	1012	2822	142	1584	378	1728	7740	350	175	1877	1495	777	1384	335	70873
	'41	2148	340	784	4519	969	10266	5559	1646	8332	4550	2457	8971	821	3118	1094	3987	16293	858	662	4650	3461	2610	4268	722	187195
	'40	1769	205	781	3161	754	7980	3367	1274	6131	3650	1641	7346	672	2052	850	2722	11343	696	491	3270	2139	2115	3435	533	138502
	'39	1419	190	646	2320	576	6082	2589	969	4170	3075	1180	4765	572	1575	722	1953	8734	581	437	2546	1560	1519	2471	477	103415
	'38	1233	106	443	2323	446	5192	2036	1027	2945	2763	933	3752	384	986	619	1359	6973	452	288	1894	1219	944	2232	346	81279
	'37	1824	251	880	4030	840	9642	3727	1396	7419	4066	2227	7932	862	1894	890	2515	11347	827	627	3239	3078	2285	4431	581	152946
	'36	1966	243	776	4117	703	10012	2792	1215	6636	3693	2204	8336	694	1440	987	2172	9239	904	583	2776	3685	1943	4169	629	143257
	'35	1514	213	646	3234	465	7378	2212	1223	4703	2811	1656	5468	568	971	897	1306	5682	697	438	2161	2617	1247	3584	414	106497
	'34	1127	146	603	2435	313	5332	1349	832	3386	1843	1119	5066	473	742	521	806	4106	491	369	1456	1838	865	2054	368	75442
	'33	416	53	223	946	112	2181	470	319	1223	606	523	612	230	209	179	170	1202	209	117	532	896	345	803	138	26526
	Before '33	8706	764	2290	8804	1095	19992	5270	4612	13284	7508	6362	14881	1665	3984	4205	4367	22690	1782	1110	4863	10632	3027	16598	1222	355536
	Unid.*	42	6	7	204	8	154	54	2	141	110	26	252	8	21	14	277	364	4	3	47	7	6	39	11	16403
	Total	24237	2854	8728	40258	7250	92999	35604	15558	65054	39760	22839	76130	7498	20655	11999	26162	116433	8499	5761	32879	34705	18863	48280	6285	1584465
G. M. C.	6 Mo. '46	37	16	38	152	52	268	64	1	180	58	68	543	8	64	40	132	312	40	10	76	56	38	94	19	5270
	'45	135	12	31	1034	37	1225	136	40	574	293	276	856	53	194	97	230	764	53	31	265	322	298	258	48	13681
	'44	103	2	12	407	29	416	117	16	330	169	96	609	12	131	40	104	486	21	22	159	150	107	205	27	7428
	'43	4	1	1	18	5	50	20	5	26	24	33	185	5	25	.....	23	134	.....	8	12	31	25	12	7	1217
	'42	303	52	43	570	145	1375	380	140	1076	426	509	1763	41	317	182	548	2031	107	62	389	493	352	456	101	22698
	'41	437	101	93	1689	265	3573	761	346	2122	855	959	2830	258	446	248	1266	2698	253	166	728	1104	696	1183	187	46841
	'40	304	78	133	1317	207	3207	533	186	1619	573	816	1572	158	319	216	981	1817	192	117	549	927	625	835	120	35184
	'39	271	60	137	797	166	2217	389	137	1181	453	553	2812	139	202	139	636	1164	147	113	410	637	332	658	106	26978
	'38	143	53	50	613	84	1463	213	71	623	323	399	1478	126	92	62	345	647	107	52	253	383	289	325	51	15902
	'37	329	72	122	1075	211	3037	499	175	1757	820	679	2135	200	242	124	583	1537	222	144	549	1035	602	1033	140	35045
	'36	219	45	105	599	57	1762	205	133	720	295	412	945	174	102	97	253	525	120	96	242	619	307	577	42	17715
	'35	66	8	22	257	11	556	29	69	227	42	106	231	58	29	38	72	94	15	24	44	180	98	180	12	5279
	'34	68	6	18	229	7	637	24	33	144	46	57	263	43	11	31	36	70	19	11	42	141	65	131	13	4046
	'33	12	.....	8	120	1	284	7	7	52	9	29	99	28	2	5	12	35	14	5	20	91	11	61	.....	1870
	Before '33	154	15	24	377	8	772	39	147	262	78	188	406	76	21	47	80	132	21	13	75	285	70	169	17	7294
	Unid.*	6	1	.....	85	1	84	1	.....	9	24	26	41	1	3	1	77	42	2	.....	8	3	2	8	7	2747
	Total	2591	512	837	9337	1286	20926	3417	1506	10902	4488	5168	16768	1380	2200	1367	5378	12488	1333	874	3821	6457	3895	6187	897	249175
International	6 Mo. '46	286	50	124	729	150	1169	663	68	1388	514	355	1283	65	208	305	829	2026	181	114	472	454	158	652	127	27753
	'45	389	37	88	702	72	1596	388	165	1304	719	389	1854	134	144	250	426	1931	97	100	501	544	346	851	140	26412
	'44	382	12	45	265	62	691	229	77	575	464	312	1536	77	75	163	237	1062	50	54	211	253	243	465	63	14839
	'43	12	3	2	27	8	77	37	24	37	62	21	305	18	16	1	40	86	5	1	12	48	15	21	13	1675
	'42	366	98	17	439	107	1262	523	223	1174	509	496	2761	54	282	241	835	1545	106	54	345	758	365	683	96	25791
	'41	1488	155	292	2307	414	5828	1549	1324	4584	1865	1365	5601	372	604	937	1838	5322	417	289	1382	2010	1280	2535	437	89486
	'40	1148	113	223	1897	330	5372	1056	1132	3446	1316	1042	3263	323	586	763	1418	3953	337	305	1055	1652	1066	2287	440	71572
	'39	962	57	244	1520	301	4321	1005	750	2429	1011	678	5294	223	465	642	1393	2994	292	287	804	1293	767	1609	348	59962
	'38	837	67	147	1368	285	3758	769	822	2094	1137	587	4240	143	365	468	969	2756	300	188	649	1271	618	1309	255	51768
	'37	863	82	115	1736	308	3883	1273	682	2823	1431	820	4372	136	359	533	790	3364	374	141	741	1661	863	1682	317	56090
	'36	988	91	191	1401	263	3782	733	541	2700	1293	795	2769	188	390	420	1253	3174	371	191	632	1396	819	1565	317	54052
	'35	731	44	100	969	194	2436	424	556	1627	764	520	1418	88	186	445	607	1894	236	137	420	905	477	1179	211	33739
	'34	337	20	77	458	73	1382	179	264	739	272	194	1231	96	60	184	179	617	84	52	197	421	168	471	71	15318
	'33	212	8	59	335	33	957	100	192	377	176	115	701	45	21	101	95	334	59	22	102	275	129	333	68	9478
	Before '33	1069	15	55	613	45	1834	52	1947	930	538	286	1203	57	44	1054	215	782	73	92	167	662	169	868	143	26440
	Unid.*	11	5	2	73	6	70	2	3	47	49	36	112	2	4	12	210	180	4	2	10	4	3	21	5	4701
	Total	10081	857	1781	14839	2651	38418	8982	8770	26274	12120	8011	37943	2021	3809	6519	11334	32020	2986	2029	7700	13607	7486	16531	3051	569078
MACK	6 Mo. '46	23	1	28	206	16	369	157	.....	90	14	57	231	3	54	11	68	58	2	15	47	19	24	12	.....	3109
	'45	23	2	35	395	30	793	259	1	231	36	57	519	20	88	20	67	212	5	43	64	44	73	48	7	5114
	'44	6	.....	28	229	4	357	185	.....	129	38	52	426	27	145	1	41	146	4	11	51	26	60	24	13	3092
	'43	1	.....	1	35	.....	84	18	.....	15	1	.....	69	.....	1	.....	3	6	.....	.....	1	1	3	6	3	394
	'42	6	.....	6	136	6	491	193	.....	114	71	59	744	14	138	.....	50	100	1	7	119	38	47	34	4	3796
	'41	22	9	75	886	3	2389	265	2	491	85	74	1424	120	115	6	104	199	11	27	177	158	98	95	2	10582
	'40	12	6	45	757	1	1857	152	3	379	47	87	696	76	51	3	48	147	11	31	76	153	54	120	2	7631
	'39	9	3	27	659	2	1778	96	3	307	29	65	1031	64	38	11	45	131	10	16	74	87	41	48	1	6700
	'38	3	5	32	491	2	1217	46	2	206	23	38	529	33	16	7	7	63	4	3	75	37	25	55	.....	4327
	'37	17	3	22	558	5	1623	50	1	161	23	87	550	31	20	4	11	117	9	4	72	97	27	73	5	5356
	'36	21	2	21	447	1	1084	38	.....	141	29	79	317	27	13	6	5	70	13	6	23	82	18	46	2	3728
	'35	7	.....	7	185	2	702	4	.....	35	13	7	81	23	2	.....	3	16	1	6	9	13	2	14	1	1648
	'34	6	.....	5	158	.....	687	4	2	9	4	3	121	14	2	.....	11	9	3	6	6	18	2	21	.....	1510
	'33	2	.....	3	136	.....	483	3	1	18	2	3	92	10	3	1	1	8	3	9	6	6	1	21	.....	1105
	Before '33	29	7	18	1538	8	6447	29	6	130	30	113	758	112	4	6	39	64	16	20	39	200	18	99	4	14415
	Unid.*	.....	.....	1	92	.....	36	.....	.....	4	.....	4	13	.....	1	.....	10	10	1	1	1	4	.....	1	.....	610
	Total	187	38	354	6907	80	20397	1499	21	2460	445	785	7601	574	691	76	511	1358	94	205	840	983	493	717	44	73115

Source of data—R. L. Polk & Co.

Unid.*—Unidentified as to year of manufacture.

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TRUCKS IN USE . . . By Makes . . . By States . . .

Continued from Page 99

Model		Ala.	Ariz.	Ark.	Calif.	Colo.	Conn.	Del.	D. C.	Fla.	Ga.	Idaho	Ill.	Ind.	Iowa	Kan.	Ky.	La.	Me.	Md.	Mass.	Mich.	Minn.	Miss.	Mo.	Mont.
PLYMOUTH	6 Mo. '46	107	3	39	21	6	2	1	1	4	21	7	12	9	2	8	2	3	44	5	.....	329	4	3	234	1
	'45	2	.....	2	1	.....	.....	.....	.....	3	9	.....	1	.....	2	1	1	.....	.....	.....	.....	5	1	.....	11	.....
	'44	.....	.....	.....	1	.....	.....	.....	.....	1	4	.....	.....	1	.....	.....	29	1	.....	1	.....	.....	.....	1	1	.....
	'43	.....	2	.....	3	.....	.....	.....	.....	4	2	.....	1	1	.....	.....	8	.....	.....	1	.....	.....	.....	1	.....	1
	'42	29	5	19	60	10	7	8	4	19	10	7	11	18	3	11	13	25	7	28	12	506	8	10	2	6
	'41	131	68	149	700	167	170	39	42	270	114	76	407	346	182	212	149	159	80	143	211	546	192	99	241	77
	'40	118	83	156	710	157	163	27	34	231	133	85	427	324	202	196	178	153	80	99	199	304	209	108	298	82
	'39	123	60	115	540	147	149	33	27	186	81	52	399	260	211	163	147	106	93	119	172	232	173	73	227	46
	'38	71	29	91	371	117	87	25	8	153	50	39	268	188	111	176	90	84	50	87	73	121	121	68	147	38
	'37	114	91	229	930	244	182	31	18	267	158	113	583	481	267	355	251	153	90	111	161	314	323	160	395	102
	'36	71	30	112	162	69	88	14	10	124	82	19	129	131	80	163	58	109	31	50	62	128	110	59	107	33
	'35	53	19	85	117	41	34	5	5	94	83	7	37	67	13	56	27	38	28	18	18	33	58	29	54	24
	'34	41	20	99	104	38	59	4	2	101	71	10	27	69	19	66	29	56	37	12	21	19	29	34	71	19
	'33	18	11	59	119	33	66	4	1	77	33	4	25	86	14	48	22	26	27	9	22	15	45	18	60	18
	Before '33	47	29	98	205	100	92	4	3	120	65	18	37	137	38	125	74	38	62	20	36	55	119	23	133	84
	Unid.*	3	.....	5	1	1	.....	2	29	17	3	.....	10	3	1	10	3	25	1	4	.....	370	2	11	14	3
	Total	919	461	1240	4045	1130	1099	197	184	1671	919	417	2374	2119	1145	1530	1072	965	630	698	987	2960	1385	697	1905	533
REO	6 Mo. '46	136	9	9	184	27	52	8	39	99	91	26	291	136	119	49	95	31	5	41	111	180	63	32	53	11
	'45	52	11	7	149	18	15	6	10	54	39	6	285	139	84	28	150	21	11	35	114	172	84	17	34	10
	'44	1	.....	.....	39	1	1	1	.....	13	3	.....	6	11	2	.....	5	6	4	4	36	17	14	.....	.....	.....
	'43	.....	.....	2	7	.....	2	.....	.....	1	1	.....	.....	3	.....	1	.....	1	.....	4	.....	.....	.....	.....	1	.....
	'42	3	1	2	56	7	2	5	2	49	5	9	49	27	8	10	11	20	11	26	32	21	15	1	16	3
	'41	2	4	.....	208	13	28	5	2	28	5	5	149	83	22	18	38	8	2	38	136	91	45	1	58	1
	'40	3	.....	.....	18	6	5	2	3	5	3	1	46	5	4	5	11	6	2	8	17	21	7	1	20	1
	'39	3	.....	2	93	14	17	3	1	38	7	.....	91	14	12	28	6	3	4	14	37	31	17	2	49	1
	'38	2	6	4	272	42	48	8	3	57	15	10	174	67	48	65	57	11	6	46	120	123	48	2	112	8
	'37	4	14	13	318	80	124	8	4	108	9	20	190	78	45	73	68	8	15	44	155	161	69	2	69	6
	'36	5	9	14	205	48	105	5	2	91	17	17	125	65	30	30	32	15	27	23	153	120	68	6	40	17
	'35	8	9	16	295	50	119	5	1	77	10	26	91	98	30	43	26	6	14	23	147	82	60	7	62	42
	'34	.....	1	3	210	14	79	5	4	50	6	8	79	38	23	28	21	4	11	33	141	70	49	.....	19	18
	'33	.....	.....	2	115	11	50	3	.....	16	3	.....	43	14	10	12	12	.....	6	11	40	20	24	.....	17	6
	Before '33	8	10	44	1266	85	473	19	3	42	20	48	280	150	194	138	109	15	130	104	329	171	241	9	132	78
	Unid.*	2	.....	1	.....	3	1	.....	5	10	8	.....	18	5	11	5	6	2	1	2	13	336	4	1	7	.....
	Total	229	74	119	3455	419	1121	83	79	738	242	176	1917	933	642	525	647	155	249	456	1581	1616	787	81	697	197
STUDEBAKER	6 Mo. '46	157	8	99	585	46	90	15	19	141	131	94	461	222	200	147	78	123	69	62	174	283	159	87	133	62
	'45	15	15	18	170	21	31	6	4	23	80	38	206	126	79	39	46	32	20	23	59	47	95	17	60	22
	'44	12	3	2	23	9	1	1	1	2	7	227	11	10	22	1	42	3	.....	6	15	5	7	3	9	27
	'43	9	1	7	14	.....	.....	.....	.....	10	4	2	12	22	3	1	10	24	10	3	11	4	.....	.....	5	31
	'42	62	16	10	239	54	7	9	1	104	50	27	97	125	93	93	40	51	11	38	17	60	92	31	49	62
	'41	86	30	54	476	67	67	7	20	92	85	86	271	350	100	128	93	61	41	35	98	180	100	41	180	102
	'40	24	2	16	94	17	13	2	4	19	16	15	109	157	22	25	21	26	11	9	45	46	31	14	10	22
	'39	7	14	7	304	36	25	5	1	32	19	37	73	115	48	19	26	17	16	18	85	44	36	8	17	86
	'38	4	9	8	292	28	22	5	1	16	16	30	90	103	47	19	24	9	16	18	31	37	51	3	19	42
	'37	14	26	29	654	80	50	9	4	27	38	102	169	222	100	111	75	22	56	39	65	95	121	18	72	72
	'36	9	14	8	236	29	27	4	4	13	19	20	185	137	42	32	24	9	24	29	50	34	67	3	55	26
	'35	4	10	9	152	15	15	1	1	8	11	9	48	54	24	17	31	8	12	6	21	14	56	2	20	27
	'34	5	4	19	124	16	16	1	1	12	12	5	22	56	9	9	15	7	16	4	27	14	34	4	9	10
	'33	5	5	7	118	10	21	1	.....	7	7	1	29	41	8	5	40	3	11	2	18	3	23	2	14	14
	Before '33	19	40	58	872	150	204	6	1	23	46	49	111	244	80	149	73	19	83	32	86	53	233	15	120	78
	Unid.*	2	.....	2	3	1	1	.....	6	9	7	3	23	2	3	9	4	12	3	1	2	142	1	2	9	3
	Total	414	197	353	4356	579	610	72	68	538	548	745	1917	1986	880	804	642	426	399	316	798	1061	1186	250	709	654
WHITE	6 Mo. '46	74	10	19	220	24	66	5	22	71	108	5	217	104	33	54	37	41	11	65	136	51	55	34	73	17
	'45	54	12	34	432	52	97	8	23	124	126	5	393	367	87	84	78	64	19	121	307	104	111	25	229	14
	'44	31	12	10	221	32	31	5	10	33	75	2	201	161	46	40	36	36	15	73	228	51	58	11	97	18
	'43	4	.....	1	188	8	7	1	4	4	26	6	76	58	10	24	30	18	6	23	32	24	12	1	44	2
	'42	79	14	36	288	75	26	6	10	130	161	7	187	100	50	48	56	91	22	82	128	23	45	69	159	22
	'41	106	29	36	692	58	196	10	74	153	215	27	547	455	23	62	134	85	26	178	534	157	149	56	261	23
	'40	49	16	30	494	31	129	7	47	75	94	5	326	183	18	19	89	41	6	95	286	68	82	19	157	8
	'39	20	19	8	205	48	104	8	18	4.	47	7	291	117	8	20	68	31	7	128	250	46	68	16	115	6
	'38	10	5	10	257	20	96	7	25	27	47	6	197	66	10	22	44	48	5	99	192	17	62	9	89	13
	'37	44	14	7	363	50	118	10	43	50	75	14	307	107	5	27	59	36	17	139	232	64	74	17	126	19
	'36	33	8	.....	319	33	109	9	33	52	66	8	367	69	10	19	77	22	14	122	235	63	93	7	123	38
	'35	15	7	3	203	15	46	3	23	23	24	3	142	32	5	9	40	22	6	63	135	15	55	11	53	4
	'34	12	5	2	178	16	37	4	34	21	28	2	167	34	6	11	34	14	4	61	103	31	60	2	73	2
	'33	3	.....	1	44	4	7	2	5	2	6	2	70	12	2	2	6	6	1	25	23	3	8	1	24	1
	Before '33	28	33	16	1125	166	112	11	22	110	125	19	472	69	21	47	53	65	22	174	394	92	298	14	181	62
	Unid.*	2	.....	2	1	1	.....	.....	5	11	13	1	31	2	1	3	4	81	.....	7	7	351	1	8	12	1
	Total	564	181	217	5230	636	1201	96	398	930	1234	119	3991	1936	335	489	844	701	181	1455	3222	1160	1231	300	1816	243
WILLYS-OVER	6 Mo. '46	222	45	106	2056	64	250	13	63	319	237	47	281	266	268	216	209	229	72	72	209	933	191	208	283	78
	'45	26	17	12	238	3	66	2	12	57	39	7	31	110	52	52	133	27	16	11	78	66	21	28	20	4
	'44	2	3	2	48	.....	6	1	3	1	7	.....	1	1	3	1	3	2	1	3	5	1	1	1	2	.....
	'43	22	.....	3	66	7	5	.....	1	7	16	2	.....	.....	2	7	45	3	.....	1	4	.....	.....	2	3	2
	'42	96	7	16	276	6	12	3	2	28	119	8	11	13	21	11	47	26	7	14	10	18	7	17	6	16
	'41	71	22	28	364	14	9	4	9	123	45	9	59	26	19	19	54	23	11	20	25	53	11	27	35	25
	'40	50	11	40	311	36	19	3	5	142	41	14	98	81	49	33	32	51	31	16	22	75	31	26	53	18
	'39	16	18	10	178	11	22	2	3	72	10	1	27	35	9	20	16	8	40	10	17	24	15	13	28	2
	'38	26	9	16	244	16	22	1	2	81	30	6	56	67	27	57	17	37	11	9	32	43	33	12	69	6
	'37	18	13	5	403	14	7	1	1	75	25	5	17	50	9	6	10	19	3	3	1	20	10	6	16	4
	'36	19	23	8	499	20	17	.....	1	112	29	23	10	63	15	6	9	13	4	2	11	30	8	6	17	2
	'35	6	12	6	479	6	10	.....	1	52	7	7	9	33	4	6	10	11	.....	1	1	12	4	3	10	7
	'34	4	2	5	24	.....	.....	.....	.....	9	8	.....	1	2	5	2	1	2	.....	.....	4	2	.....	1	1	.....
	'33	.....	1	.....	28	5	6	.....	.....	14	3	.....	2	4	2	1	2	.....	1	2	.....	2	2	2	1	.....
	Before '33	7	13	30	175	70	61	3	.....	50	24	16	83	116	64	127	29	7	32	16	15	23	125	5	106	36
	Unid.*	4	.....	3	1	1	1	.....	7	10	7	1	7	2	1	.....	2	15	1	1	.....	191	3	9	8	1
	Total	589	196	290	5388	273	513	33	110	1152	647	146	683	869	550	584	621	473	230	181	434	1493	462	368	658	199

Source of data—R. L. Polk & Co. Unid*—Unidentified as to year of manufacture.

Summary of Trucks in Use by Makes,

	July 1 1946 Total	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	Prior to 1933	Yr. Not Given
Autocar	20,203	1,412	2,175	1,175	87	617	2,511	1,575	1,758	1,318	1,725	1,156	684	887	664	2,373	126
Brockway	19,156	1,109	2,053	1,167	57	472	2,420	1,489	1,736	1,389	1,578	1,477	773	644	297	1,441	74
Chevrolet	1,490,093	57,407	33,489	17,117	1,339	94,234	211,017	171,385	137,361	94,968	159,476	146,187	89,672	75,049	39,282	150,442	11,688
Diamond T	54,744	2,194	3,204	1,880	112	1,576	6,634	5,709	4,736	3,882	6,672	5,926	3,881	2,640	1,799	3,454	445
Dives	14,044	1,335	1,517	239	37	772	2,695	1,648	1,477	1,148	1,025	834	321	203	147	506	140
Dodge	542,977	46,998	19,347	8,071	508	36,766	82,168	55,550	45,705	30,938	52,160	68,433	34,684	23,432	9,727	23,161	5,431
Federal	18,309	1,523	2,212	795	140	814	1,534	1,289	1,218	1,019	1,500	1,676	1,034	857	423	1,797	478
Ford	1,584,465	59,903	45,594	19,428	2,699	70,873	187,195	138,502	103,415	81,279	152,946	143,257	106,497	75,442	28,526	355,536	16,403
G.M.C.	249,175	5,270	13,661	7,428	1,217	22,698	46,841	35,184	26,978	15,902	35,045	17,715	5,279	4,046	1,870	7,294	2,747

. . . By Year of Manufacture . . . As of July 1, 1946

Model		Neb.	Nev.	N. H.	N. J.	N. M.	N. Y.	N. C.	N. D.	Ohio	Okla.	Ore.	Pa.	R. I.	S. C.	S. D.	Tenn.	Tex.	Utah	Vt.	Va.	Wash.	W.Va.	Wis.	Wyo.	Total
PLYMOUTH	6 Mo. '46	3	.....	1	41	1	90	8	.....		18	1	13	1	1	1	7	10	18	1	9	3	1	2	1	1106
	'45	.....	.....	.....	1	.....	1	.....	.....	.....	1	.....	5	.....	.....	1	.....	2	2	.....	2	.....	.....	3	.....	57
	'44	.....	.....	.....	1	.....	5	.....	.....	1	.....	.....	34	.....	.....	.....	1	1	.....	.....	.....	1	.....	1	.....	76
	'43	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	25	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	52
	'42	6	2	3	117	1	270	23	6	21	54	2	267	11	2	1	98	20	39	2	45	13	7	14	1	1845
	'41	106	30	59	727	66	1600	294	100	524	249	113	1039	81	148	43	195	583	54	23	333	251	239	285	30	12159
	'40	85	35	65	536	59	1155	192	84	526	250	141	614	90	113	54	119	570	67	42	226	204	211	296	20	10477
	'39	91	17	54	448	51	898	174	68	403	191	112	1010	64	86	54	136	489	53	33	170	116	197	270	34	9153
	'38	83	13	21	351	53	619	135	41	298	160	70	809	24	58	39	97	436	31	21	127	113	194	228	22	6723
	'37	104	31	46	545	131	892	334	90	609	312	207	885	69	142	69	212	701	72	38	228	278	383	613	43	13058
	'36	57	8	15	310	17	314	72	19	160	115	51	330	27	33	32	72	245	18	10	68	115	86	177	9	4314
	'35	35	1	9	118	4	115	37	10	68	63	14	92	11	18	13	50	127	16	1	33	66	30	86	4	2053
	'34	27	4	16	102	7	115	28	4	68	65	16	79	27	16	6	39	139	7	6	39	45	38	66	7	2021
	'33	22	2	9	89	4	112	20	4	54	32	19	57	19	9	7	33	78	8	2	19	50	29	88	4	1628
	Before '33	82	6	46	94	3	194	24	16	115	56	69	114	16	25	42	45	165	13	22	32	194	38	218	15	3368
	Unid.*	3	1	1	15	2	12	.....	.....	4	11	.....	17	.....	.....	.....	12	8	1	.....	1	1	1	1	.....	609
	Total	704	150	345	3496	399	6383	1341	442	2859	1576	815	5390	440	651	362	1116	3574	397	201	1333	1450	1450	2349	190	68697
REO	6 Mo. '46	19	1	39	89	9	174	92	7	196	33	44	286	10	49	20	56	114	.....	17	47	27	33	68	13	3308
	'45	17	1	23	60	1	167	33	32	170	46	29	268	6	53	14	10	39	6	17	59	78	50	48	13	2771
	'44	.....	.....	1	8	.....	5	2	.....	12	3	22	65	1	6	1	.....	.....	.....	2	5	9	10	4	1	321
	'43	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	2	26	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	53
	'42	6	1	15	33	.....	54	6	1	42	9	123	238	7	1	1	3	8	.....	1	11	88	32	29	7	1108
	'41	2	2	8	62	1	132	3	4	101	6	68	254	8	1	4	5	28	1	4	22	27	47	54	10	1838
	'40	1	.....	3	4	.....	21	2	1	6	7	5	82	4	.....	.....	2	5	1	4	10	19	6	16	.....	399
	'39	10	.....	.....	43	.....	118	11	3	40	7	10	114	4	1	5	6	8	1	1	2	4	23	16	4	910
	'38	31	3	7	103	3	269	15	5	167	43	36	326	19	8	13	16	32	1	11	24	48	66	86	9	2694
	'37	14	1	18	98	9	268	29	10	202	32	41	334	24	7	33	19	47	5	15	26	69	102	109	12	3208
	'36	23	12	22	75	6	199	3	9	136	16	40	177	39	6	18	9	36	4	10	14	48	48	67	7	2293
	'35	19	8	26	120	5	333	12	23	126	13	74	131	29	12	20	11	41	15	25	22	120	45	100	7	2681
	'34	4	2	15	95	8	198	5	12	89	5	11	218	30	1	10	2	11	5	13	11	42	45	47	2	1793
	'33	4	.....	4	44	1	104	4	3	40	3	4	125	15	.....	3	.....	3	1	3	7	13	10	24	.....	830
	Before '33	92	10	42	411	2	680	15	69	322	60	132	596	88	10	79	22	108	17	42	40	251	45	333	16	7598
	Unid.*	.....	.....	1	16	.....	18	1	.....	3	4	16	25	1	.....	3	4	1	.....	.....	.....	1	.....	9	.....	535
	Total	242	38	224	1231	45	2741	233	179	1652	287	647	3267	283	155	224	185	477	57	165	301	848	562	1008	101	32335
STUDEBAKER	6 Mo. '46	47	30	28	246	22	376	116	5	357	100	109	593	19	68	44	133	339	68	18	95	121	28	122	37	6888
	'45	34	5	9	42	8	134	43	33	200	16	49	262	7	35	28	30	76	15	6	28	34	25	71	12	2494
	'44	5	.....	.....	5	.....	10	30	2	6	4	175	75	3	31	1	1	2	.....	.....	29	111	12	2	15	968
	'43	.....	.....	.....	11	1	33	32	1	25	3	3	21	.....	20	.....	3	6	.....	3	19	20	17	.....	.....	401
	'42	28	8	1	58	14	116	107	38	133	44	36	435	3	44	17	73	99	24	5	53	57	10	33	23	2895
	'41	61	26	20	164	8	544	185	131	383	92	122	267	26	66	31	109	271	61	19	125	203	87	98	41	5868
	'40	10	3	7	72	.....	118	15	10	77	33	16	75	7	6	4	11	51	10	4	9	48	18	29	9	1412
	'39	16	12	2	55	7	147	6	7	84	9	54	209	12	3	12	23	75	33	4	13	99	35	28	15	2024
	'38	20	5	4	41	3	119	3	8	110	14	38	224	3	3	11	17	84	28	6	8	60	19	47	9	1825
	'37	27	27	21	144	17	336	22	29	228	58	156	381	24	18	23	29	197	56	9	24	202	79	116	25	4516
	'36	6	3	11	96	4	206	3	12	159	14	35	163	12	7	10	25	38	17	1	16	79	21	53	6	2088
	'35	11	2	.....	33	1	86	4	11	62	12	27	71	6	10	13	4	27	10	1	5	52	17	29	1	1070
	'34	11	1	4	42	2	55	6	9	29	5	17	42	6	12	4	3	14	5	.....	10	23	8	4	2	785
	'33	2	.....	1	22	1	60	3	5	19	5	9	36	.....	2	6	4	10	.....	2	3	23	3	13	.....	624
	Before '33	136	7	33	136	7	297	8	71	136	63	153	227	25	18	77	48	123	13	29	37	336	51	269	17	5153
	Unid.*	.....	1	.....	9	.....	27	1	.....	2	3	3	4	.....	1	.....	9	7	1	.....	.....	2	.....	4	.....	324
	Total	412	130	141	1176	95	2664	674	342	1990	473	1002	3085	153	344	281	522	1419	341	107	474	1470	430	918	212	39193
WHITE	6 Mo. '46	40	2	5	167	18	288	89	.....	347	47	34	291	9	44	5	109	198	1	2	62	30	38	68	8	3470
	'45	107	2	11	248	30	661	113	13	583	148	116	607	50	87	17	105	395	10	4	149	81	91	268	15	6880
	'44	57	.....	7	138	10	372	69	2	310	55	58	380	66	39	4	48	224	1	8	79	65	53	137	15	3725
	'43	19	1	1	48	3	48	37	.....	129	10	22	127	22	6	.....	24	52	4	.....	19	54	10	34	6	1285
	'42	44	10	10	93	29	256	97	1	316	54	138	503	18	91	5	110	194	10	10	137	101	75	150	21	4377
	'41	49	4	20	490	27	1065	247	2	1292	126	49	667	47	109	3	211	588	26	13	184	202	128	284	20	10239
	'40	14	1	20	354	12	535	98	4	870	54	60	303	42	45	8	98	201	22	9	106	75	89	135	6	5512
	'39	8	4	5	327	6	526	70	2	522	31	39	580	17	17	.....	45	132	5	8	60	62	54	78	6	4300
	'38	8	8	6	248	5	553	43	1	307	15	49	461	18	17	1	48	109	5	6	30	81	38	44	3	3485
	'37	10	9	12	354	10	1047	39	2	519	44	63	604	26	44	2	47	135	6	15	77	121	118	74	12	5407
	'36	15	4	9	433	4	861	65	5	479	21	30	420	21	25	1	40	113	1	8	81	90	77	91	2	4819
	'35	3	3	7	239	2	684	38	4	280	10	35	172	18	11	3	21	36	1	1	28	49	24	37	.....	2556
	'34	8	.....	2	267	1	532	21	2	227	13	35	151	10	17	.....	9	43	1	3	27	50	25	38	.....	2421
	'33	1	1	4	58	.....	104	4	3	83	.....	2	140	7	1	.....	5	13	.....	.....	15	12	4	7	.....	724
	Before '33	53	12	10	583	14	1176	32	11	692	56	158	600	50	31	15	53	102	8	3	86	322	33	97	18	7946
	Unid.*	.....	1	.....	26	.....	17	2	.....	8	4	5	20	1	3	.....	26	13	1	.....	2	.....	1	8	2	685
	Total	436	62	129	4073	171	8825	1064	52	6964	686	993	6026	402	587	61	995	2548	102	90	1142	1395	838	1546	134	67831
WILLYS-OVER	6 Mo. '46	112	42	48	449	29	692	365	9	875	220	188	619	43	142	86	123	673	81	78	307	104	116	150	49	12537
	'45	30	8	9	111	4	174	20	8	152	32	43	81	14	15	12	10	131	1	11	51	24	41	23	5	2136
	'44	.....	.....	3	67	.....	101	2	1	3	6	4	27	2	3	.....	1	8	1	4	5	1	2	4	1	344
	'43	6	2	1	20	2	28	9	.....	4	9	30	31	1	1	.....	2	16	10	.....	3	12	2	.....	6	390
	'42	12	3	2	75	.....	122	30	9	50	51	30	145	1	11	3	27	131	18	.....	17	80	39	2	8	1663
	'41	10	2	13	71	1	177	44	15	106	28	37	181	40	22	12	48	58	10	7	23	63	51	7	9	2138
	'40	9	4	17	100	4	223	56	12	152	42	70	118	11	18	10	68	106	18	7	12	47	55	40	5	2492
	'39	5	1	11	26	3	66	21	1	80	30	9	167	5	12	11	44	53	3	4	19	13	45	11	4	1251
	'38	11	4	14	57	5	106	38	13	91	48	28	130	2	15	10	15	108	7	7	35	20	44	47	7	1790
	'37	2	2	3	35	2	30	10	.....	58	25	42	34	2	7	1	19	28	15	4	4	99	5	7	.....	1173
	'36	5	4	13	25	6	47	6	6	106	29	78	15	1	4	2	32	59	11	1	8	154	13	8	3	1581
	'35	3	3	4	21	4	26	11	3	83	11	44	8	1	1	.....	10	18	7	1	3	67	4	5	1	1036
	'34	1	1	.....	1	.....	4	1	1	2	1	4	5	.....	2	.....	1	3	2	2	1	9	2	.....	.....	116
	'33	.....	.....	.....	2	.....	18	.....	1	8	.....	6	3	3	1	1	2	5	.....	.....	.....	3	2	7	1	141
	Before '33	95	4	20	53	1	181	7	47	165	32	44	175	11	1	33	24	62	8	16	11	93	34	266	7	2622
	Unid.*	1	1	4	14	.....	14	3	.....	2	5	.....	6	.....	.....	3	12	6	.....	2	2	.....	.....	4	1	356
	Total	302	81	162	1127	61	2006	623	124	1937	567	657	1745	137	255	184	438	1463	192	144	501	789	455	579	107	31766

Source of data—R. L. Polk & Co. Unid*—Unidentified as to year of manufacture.

by States and Year of Manufacture

	July 1 1946 Total	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	Prior to 1933	Yr. Not Given
International	569,076	27,753	26,412	14,839	1,675	25,791	89,486	71,572	59,962	51,768	56,090	54,052	33,739	15,318	9,478	26,440	4,701
Mack	73,115	3,109	5,114	3,092	394	3,796	10,582	7,631	6,700	4,327	5,536	3,728	1,646	1,510	1,105	14,415	610
Plymouth	68,697	1,106	57	76	52	1,845	12,159	10,477	9,153	6,723	13,056	4,314	2,053	2,021	1,628	3,368	609
Reo	32,338	3,308	2,771	321	53	1,108	1,838	399	910	2,694	3,206	2,293	2,681	1,793	830	7,598	535
Studebaker	39,293	6,866	2,494	988	401	2,895	5,868	1,412	2,024	1,825	4,516	2,088	1,070	765	624	5,153	324
White	67,831	3,470	6,880	3,725	1,285	4,377	10,239	5,512	4,300	3,485	5,407	4,819	2,558	2,421	724	7,946	685
Willys-Overland	31,766	12,537	2,136	344	390	1,663	2,138	2,492	1,251	1,790	1,173	1,581	1,036	116	141	2,622	356
Totals (including miscellaneous)	5,068,792	241,393	175,181	84,234	11,463	279,448	691,859	525,101	418,857	313,945	516,530	472,989	295,673	213,164	99,667	676,744	52,544



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PUBLICATIONS

A selected list of the latest in literature — books, pamphlets, catalogs — chosen by the staff to help fleet operators solve maintenance and operating problems. Use the postcard.

L98. Regulator Manual

Issued as a part of the educational program sponsored by the Automotive Electric Assn. and United Motors Service, this 20-page, illustrated manual contains information on the operation, checks and adjustments of the various types of regulators manufactured by Delco-Remy. It should be in the hands of every mechanic.

The first section, Watts' Regulation, deals with the passenger car regulator, and the second section, Heavy-Duty Regulators, discusses the regulators used on trucks and buses.

All materials is presented clearly, and illustrated with diagrams and schematic drawings to show even the novice exactly how the units operate. Instruction covers the proper procedures for adjusting the cut-out relay, the voltage setting, the current regulator. Special instructions are included for making adjustments on the four-unit and the five-unit regulators.

The last division of the manual is devoted to service test specifications applicable to all types of Delco-Remy regulators.

This handy manual will ably supplement your own truck manual and enable the service man to understand the operation and service of one of the most intricate units on the vehicle. Get a copy by writing L98 on the free postcard and add this valuable guide to the electrical department reference material.

L99. Cleaning Manual

A new 64-page, illustrated handbook for truck and bus fleet use is now ready for truck fleet distribution. This Truck and Bus Cleaning Manual provides the latest methods and materials for fast, thorough and economical cleaning with minimum labor with particular reference to preventive maintenance.

Divided into chapters, the first part of this book deals with the cleaning of engines and chassis either by steam gun or by a cold solution of a neutral, non-inflammable soap in liquid form; the control and prevention of sludge; the cleaning of carburetors, fuel and water pumps, with solvents of detergent action. The cleaning of cooling systems and decarbonizing dismantled parts are also among the many problems of the truck field discussed in this manual.

Another section describes the various kinds of cleaning equipment used in all size shops.

Bound in a heavy-duty cover stock, the manual can keep its textbook appearance when handed around from man to man in the shops and garages. Large, clear photographs, plenty of before and after pictures, easy to read type face make this manual invaluable to fleetmen everywhere. Write L99 on the enclosed postcard and add this maintenance aid to your files.

L100. Tire Valve Manual

With the development of the new Wide Base Rim and "W" tube for trucks and buses, the tire valve converting and replacement practice has changed accordingly.

To keep up with the latest changes and to aid in training new personnel in repair shops, a new Tire Valve Converting Manual has been made available to the fleet field.

It tells which valve to use for a specific rim and tube combination and it shows how to make the correct first and second bends in the valve to fit the old and new rim designs. Complete with detailed illustrations and valve connecting charts for wide base, standard and former standard rims, this 16-page publication will simplify repairs.

You will need this new Tire Valve Converting Manual for your service work. Write L100 on free postcard for a copy.

L101. Speedometer Data

The speedometers on the trucks in many fleets are not getting proper attention today —mainly because mechanics know so little about these units. The result is early failure of the mechanism with the added expense of replacement.

Few manuals develop the service procedure adequately—but here is a booklet with the answers to all your questions. This 20-page, illustrated manual on approved service techniques will provide the mechanic with clear, concise instructions on diagnosing speedometer troubles, replacing cables, using the cable kits, and lubrication and service.

Tips on reliable methods of testing the speedometer head are given as are instructions on fitting the cable with special tools. The last part of the manual shows pictorially just how a speedometer works, giving the reader a better appreciation of this important accessory. A wealth of valuable information will be found in this publication. Just write L101 on the free postcard for a copy of the manual.

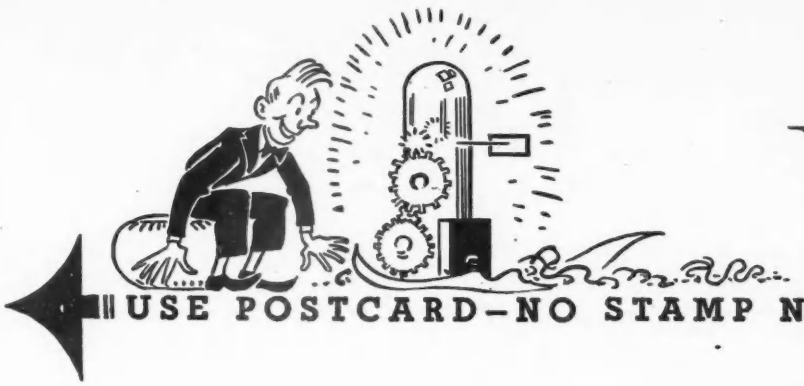
L102. Tachograph Book

A new bulletin has been published describing the Sangamo Tachograph, a recording speedometer which furnishes a daily graphic record of a vehicle's operation.

The new bulletin, SU-3A, explains in detail the tachograph's operation in a manner of interest to truck and bus fleet owners. It covers such topics as: "Driving By Instruments," "Savings In Maintenance," "Accident Prevention," and "Constant Supervision of Vehicles."

Of special interest to fleet operators and their drivers are the discussions concerning lost time due to traffic conditions or loading and pick-up delays, also the discussions on how tachograph protects the driver and his company in the event of an accident.

Free copies of the bulletin can be obtained by writing on the free postcard.



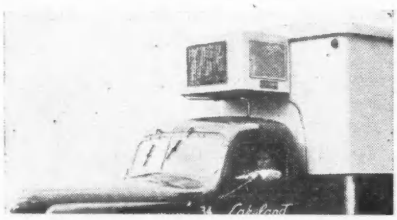
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NEW PRODUCTS

The newest in replacement parts, accessories, shop equipment and supplies. For more details of products described and illustrated on these pages, use accompanying free postcard.

P183. Refrigeration Unit

The U. S. Thermal Control Co., Minneapolis, Minn., has developed a new Thermo Model E truck refrigeration unit for maintaining low temperatures automatically for any length of time during transport.



All the parts of the unit are housed in a single frame consisting of two main sections separated by an insulated shield. The cooling oil section, which is inserted into the truck body, contains the evaporator coil and fan. The section which remains outside the body contains the engine, condenser, compressor and controls.

The unit is inserted into an opening about 17 in. high by 31 in. wide, in the space over the cab and fastened with four body bolts. It operates independently of the truck engine, being powered by a two-cylinder gasoline engine. Refrigeration is accomplished by the forced-air principle. The unit weighs under 600 lb.

Use Free Postcard For More Details.

P184. Tire Demounter

Ease of operation, speed and convenience of handling are said to be the principle advantages of the new Universal Truck Tire Demounter developed by the Clark Equipment Co., Inc., Muncie, Ind. Frozen truck tires are freed from the rims in one simple operation and without damage to beads or rims, according to the company.

This demounter is complete in two units—the base on which the tire rests, and the pressure screw assembly. The device is quickly adjusted to all flat base and semi-drop center rims on wheels from 15 to 24 in. in diameter. It is portable but has holes for fastening to the floor or platform if desired. Of welded steel construction, the demounter weighs 260 lb. and develops up to 60,000 lb. of pressure.

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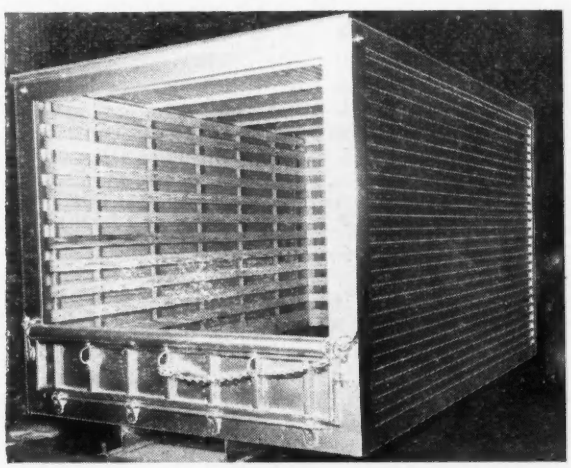
P185. Fire Extinguishers

A new 5-lb. and new 2½-lb. CD Sno-Fog fire extinguisher have been announced by the General Detroit Corp., Detroit, and the General Pacific Corp., Los Angeles. The new models replace the older 4-lb. and 2-lb. models, fit the wall brackets and are offered at the same price.

Use Free Postcard For More Details.

P186. Great Dane Weld-Bilt Truck Body

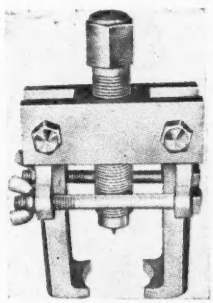
A new type of truck body of light-weight, all-welded construction has been developed by the Steel Products Co., Savannah, Ga., of standardized design capable of production-line manufacture, the truck body comes in three standard sizes: 12, 14 and 16 ft. lengths; all measuring 7 ft. 6 in. in overall width and 6 ft. inside height. Carrying capacities are 494, 578 and 660 cu. ft., respectively. Body is framed of light rugged members, welded throughout and covered with corrugated, galvannealed 24-gage sheet steel. Several types of rear door construction are available.



Use Free Postcard For More Details.

P187. Pitman Puller

The Owatonna Tool Co., Owatonna, Minn., has just announced a new special tool that pulls the pitman arms on practically all makes of trucks. It is adjustable to size and is short-coupled enough to get into restricted quarters. It is well built to handle this difficult job and rugged enough to stand tough service. Puller arms are drop-forged for additional strength.



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P188. Engine Dollies

Two new, all purpose, universal single engine dollies designed for teardown, storage or display have been introduced by

(TURN TO NEXT PAGE, PLEASE)

NEW PRODUCTS

USE POSTCARD—NO STAMP NEEDED

(CONTINUED FROM PAGE 103)

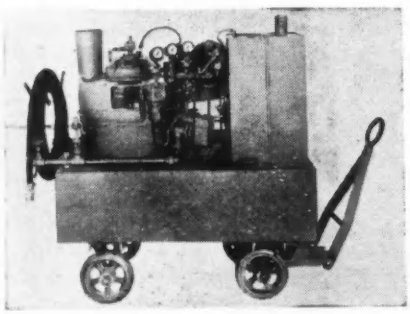
the Clayborne Mfg. Co., Chicago. One dolly will accommodate all engines up to 1000 lb. and is suited for light and medium passenger car engines. The other will handle all engines up to 2000 lb. and is ideal for heavy bus and truck engines. Adjustable side rails enable each dolly to accommodate practically all engines.

Completely mobile, the engine dollies are equipped with heavy duty, free rolling casters. Welded throughout for strength and light weight.

Use Free Postcard For More Details.

P189. Vapor Cleaner

An improved vapor steam cleaning unit, for use in cleaning and paint-stripping is announced by Oakite Products, Inc., New York. Featuring an enclosed-coil and downdraft flame, the unit delivers a hot vaporized spray in either wet or dry state under pressures up to 200 lb and in sufficient quantity to operate two steam guns



simultaneously. A 12-gal. fuel tank provides ample steam generation for an uninterrupted 8-hr, two-gun cleaning cycle. After initial throttle setting, unit operation is completely automatic. Standard dual-chamber steam gun is furnished with the unit.

The Unit is available as a stationary model, on shop-wheel chassis or on a trailer-type chassis for use at locations away from shop or plant. A ¾-hp, 60-cycle, 110-220 volt a.c. motor is rigidly mounted on the unit. For special applications, alternate motive power includes a self-contained gasoline engine, where power source is unavailable.

Use Free Postcard For More Details.

P190. Battery Charger

A new moderate-rate battery charger is announced by 20th Century Products, Inc., Chicago. The charger is simple and economical to operate. Cables are attached to the battery posts and battery remains in vehicle. Fuses prevent any danger to battery or charger, while an oversize transformer and rectifier eliminate overheating. Transformer windings are of high grade pure copper wire, vacuum treated and impregnated with molten wax to protect against moisture and corrosion.

Use Free Postcard For More Details.

P191. Electric Timer

Safe, accurate control of any electric tube vulcanizer operating on 110-volt circuits and drawing up to 5 amps. is claimed

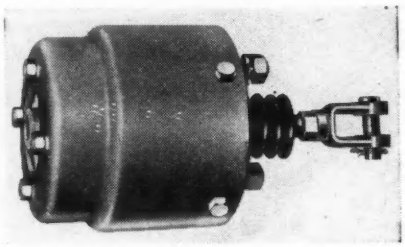


for the new model ET-150 Electro-Timer, produced by the J. W. Speaker Corp., Milwaukee. Operation is simple. The vulcanizer is plugged into the timer, and the timer is plugged into the circuit. Setting the pointer closes the circuit for any period up to 15 minutes.

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P192. Brake Chamber

Embodying all the better features of the brake chamber and brake cylinder, the new Bendix-Westinghouse Rotochamber is unique in its design and construction. Considerably smaller in diameter than a brake chamber of like capacity, it produces the same output force which is constant throughout the entire piston stroke.



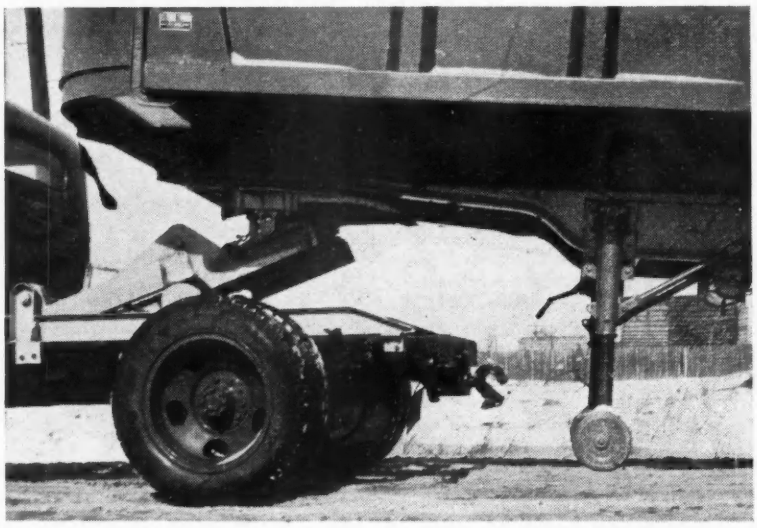
Although the Rotochamber has the appearance of a cylinder, its power is derived from a rolling type rubber diaphragm which eliminates packing cup leakage and friction problems experienced with the conventional cylinder. The Rotochamber requires no lubrication and, due to its construction, retains the same simple maintenance features of the conventional brake chamber.

The Rotochamber will be available in eight sizes with effective areas from 9 to 50 sq. in. and strokes from 2 to 4 in. Over-all diameters range from 4 13/16 to 9½ in.

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(TURN TO PAGE 181, PLEASE)

P193a. Hydraulically-Operated Fifth Wheel Hoist



This hydraulically-operated fifth wheel attachment for truck-trailer operation, developed by Charles E. Pollard, Detroit, Mich., is recommended primarily for yard switching, although it can be lowered to any suitable height for local delivery service. Installed in conjunction with the fifth wheel the device is arranged to elevate the front wheel dollies of a semi-trailer sufficiently to permit movement of the trailer either in the elevated position or with landing gear in the vertical parking position. A hydraulic hoist installed forward of the cab is operated by means of two levers in the truck cab. This device permits movement of a parked semi-trailer by one man without leaving his cab.

Use Free Postcard for More Details.

New Truck Registrations by Makes and States*

FOR JANUARY, 1947 AND FOR THE YEAR 1946

	Auto-car	Brock-way	Chev-rolet	Dia-mond T	Divco	Dodge	Fed-eral	Ford	FWD	GMC	Inter-nat-ional	Mack	Osh-kosh	Reo	Ster-ling	Stude-baker	Ward La France	White	Willys	All Others	Total
Alabama..... Year 1946	20	2	4988	72	29	2190	103	3606	.....	547	2162	99	.....	358	.....	373	.....	178	871	107	15,705
January 1947	.....	.....	364	13	6	179	5	365	.....	81	169	7	.....	32	.....	38	.....	8	73	1	1,347
Arizona..... Year 1946	7	.....	1031	9	13	447	21	815	3	106	352	16	.....	72	.....	134	.....	51	305	42	3,424
January 1947	3	.....	81	1	.....	30	3	59	.....	20	24	.....	.....	5	.....	5	.....	1	12	4	248
Arkansas..... Year 1946	2	.....	3146	36	1	1334	34	3427	.....	375	1203	24	.....	52	.....	216	.....	48	416	14	10,598
January 1947	.....	.....	141	1	.....	44	.....	129	.....	15	22	.....	.....	.....	.....	10	.....	1	5	.....	388
California..... Year 1946	417	45	10206	205	299	6407	179	8029	49	2208	4356	122	.....	507	114	2441	.....	558	4528	773	41,437
January 1947	26	7	1018	40	10	359	13	535	2	333	272	3	.....	78	6	142	.....	39	110	43	3,036
Colorado..... Year 1946	28	.....	1631	50	39	778	18	1348	32	216	692	7	.....	67	.....	180	.....	63	250	13	5,412
January 1947	2	.....	173	11	1	80	4	213	5	43	86	.....	.....	5	.....	22	.....	2	23	1	671
Connecticut..... Year 1946	193	96	1482	62	70	916	96	928	12	242	768	67	.....	109	18	244	.....	166	551	69	6,089
January 1947	35	12	239	8	5	109	12	88	3	44	96	18	.....	12	1	30	.....	8	33	8	761
Delaware..... Year 1946	41	7	472	9	16	282	1	347	.....	100	209	1	.....	20	.....	103	.....	27	87	16	1,746
January 1947	2	2	84	.....	.....	49	.....	50	1	14	25	1	.....	4	.....	14	.....	4	13	.....	263
Dist. of Col..... Year 1946	19	28	533	17	71	303	13	419	.....	107	278	10	.....	108	.....	67	.....	58	131	18	2,180
January 1947	.....	1	61	3	10	49	2	59	.....	16	18	.....	.....	3	.....	5	.....	5	.....	.....	232
Florida..... Year 1946	110	6	3342	70	27	2032	86	3723	9	551	1363	241	.....	219	.....	463	.....	157	946	67	13,412
January 1947	4	.....	632	22	1	246	11	575	7	101	228	24	.....	27	.....	43	.....	29	58	4	2,012
Georgia..... Year 1946	11	.....	4025	57	16	1935	52	3828	.....	396	1458	109	.....	213	.....	462	.....	210	601	73	13,446
January 1947	1	.....	174	5	1	84	2	203	.....	47	49	4	.....	10	.....	20	.....	2	22	3	627
Idaho..... Year 1946	6	.....	1099	26	8	519	33	799	.....	158	479	8	.....	54	.....	217	.....	13	173	51	3,643
January 1947	.....	.....	148	3	.....	33	3	54	.....	21	35	.....	.....	11	.....	12	.....	.....	13	.....	333
Illinois..... Year 1946	144	18	7996	488	314	5264	170	5779	9	1269	4912	173	.....	645	6	1346	.....	508	1974	278	31,393
January 1947	9	13	1258	93	32	564	10	738	1	222	455	8	.....	76	1	168	.....	48	80	35	3,809
Indiana..... Year 1946	21	139	4140	160	112	2601	108	2819	1	647	2584	23	.....	345	.....	1288	.....	291	1117	138	16,534
January 1947	13	46	626	18	15	417	17	540	1	205	431	32	.....	62	.....	190	.....	64	119	38	2,864
Iowa..... Year 1946	8	3	4440	163	33	1929	87	2743	3	456	2199	77	.....	300	.....	578	.....	97	871	71	14,058
January 1947	.....	.....	378	21	1	205	5	360	.....	60	192	8	.....	37	.....	57	1	8	78	5	1,416
Kansas..... Year 1946	6	.....	4413	111	16	1352	63	2461	5	397	1784	21	.....	144	.....	514	.....	109	683	75	12,154
January 1947	.....	.....	307	12	2	81	6	179	.....	51	121	.....	.....	13	.....	46	.....	15	20	3	856
Kentucky..... Year 1946	7	2	3709	84	25	1681	67	2405	2	479	1683	24	.....	254	.....	349	.....	97	828	35	11,729
January 1947	.....	.....	256	12	1	136	3	227	.....	61	131	4	.....	12	.....	31	.....	2	47	4	927
Louisiana..... Year 1946	28	.....	2698	67	11	1294	44	2398	3	241	1160	51	.....	125	.....	353	.....	103	542	25	9,143
January 1947	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maine..... Year 1946	12	14	1424	.....	26	753	33	1025	6	191	626	37	.....	32	10	175	.....	24	311	74	4,773
January 1947	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maryland..... Year 1946	106	88	2613	40	98	1247	82	1339	.....	456	1059	66	.....	225	6	274	.....	179	609	67	8,554
January 1947	9	8	343	4	11	168	5	208	.....	53	135	12	.....	35	.....	29	.....	20	30	1	1,071
Massachusetts..Year 1946	460	230	3449	124	311	2361	101	2836	19	582	1757	189	.....	367	69	566	.....	395	939	160	14,915
January 1947	.....	3	124	9	16	64	2	143	.....	20	47	7	.....	14	3	9	.....	7	60	2	530
Michigan..... Year 1946	63	81	5192	127	309	4470	387	5248	8	1258	2196	49	.....	659	4	880	.....	207	2777	308	24,203
January 1947	4	2	929	20	25	409	30	822	.....	131	233	9	.....	86	.....	97	1	6	107	19	2,930
Minnesota..... Year 1946	38	2	3532	117	67	2179	94	3113	27	499	2067	93	.....	155	1	523	.....	176	669	111	13,453
January 1947	1	1	404	10	12	166	15	325	4	40	120	3	.....	9	.....	24	2	6	23	3	1,168
Mississippi..... Year 1946	3	.....	4218	70	5	1676	52	3317	.....	445	1367	55	.....	127	.....	309	.....	111	512	30	12,297
January 1947	.....	.....	384	4	2	167	2	298	.....	54	109	4	.....	4	.....	39	.....	12	67	2	1,148
Missouri..... Year 1946	12	1	7537	158	131	3333	124	4623	.....	795	2544	28	.....	233	.....	710	.....	203	1227	167	21,826
January 1947	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montana..... Year 1946	12	.....	1506	38	1	638	5	763	4	160	637	3	.....	22	1	249	.....	31	286	58	4,414
January 1947	.....	.....	153	4	.....	62	1	101	1	18	56	.....	.....	3	.....	19	.....	5	33	1	457
Nebraska..... Year 1946	2	1	2496	122	17	1084	48	1638	31	279	1378	42	.....	94	.....	298	.....	162	555	36	8,283
January 1947	.....	.....	212	22	.....	126	4	242	4	58	148	12	.....	16	.....	37	.....	15	68	1	965
Nevada..... Year 1946	4	1	244	5	4	223	8	253	1	58	140	4	.....	3	5	68	.....	5	89	23	1,136
January 1947	.....	.....	19	.....	.....	6	.....	23	.....	4	8	.....	.....	.....	.....	6	.....	1	6	.....	73
New Hampshire..Year 1946	11	7	562	6	10	298	12	372	2	72	225	19	.....	54	.....	33	.....	16	131	8	1,838
January 1947	3	1	97	2	.....	47	.....	62	.....	20	36	3	.....	9	1	8	.....	5	43	2	339
New Jersey..... Year 1946	438	465	3969	162	187	2415	212	3426	10	970	2117	305	.....	219	10	647	.....	434	1447	233	17,668
January 1947	25	26	310	21	6	178	13	204	.....	91	187	27	.....	9	.....	31	2	21	38	4	1,193
New Mexico..... Year 1946	3	.....	1118	31	3	518	21	609	5	162	354	23	.....	28	.....	107	.....	39	76	16	3,113
January 1947	.....	.....	92	3	.....	24	.....	43	.....	11	10	1	.....	2	.....	9	.....	.....	12	1	208
New York..... Year 1946	1137	1545	9299	689	327	7202	506	7518	105	2321	4580	1249	.....	729	86	1545	.....	1245	3045	708	43,836
January 1947	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Carolina...Year 1946	117	6	4639	56	32	2183	111	3627	.....	313	1527	176	.....	304	.....	698	.....	218	983	206	15,198
January 1947	3	3	199	5	.....	63	.....	136	.....	11	48	16	.....	20	.....	20	.....	16	23	5	568
North Dakota....Year 1946	.....	.....	930	25	7	575	9	857	10	89	777	8	.....	46	.....	167	.....	17	277	9	3,823
January 1947	.....	.....	45	1	.....	24	.....	29	.....	7	14	.....	.....	2	.....	8	.....	2	17	1	150
Ohio..... Year 1946	197	73	7649	320	328	5616	382	5572	33	1290	4708	196	.....	749	1	1634	.....	981	2506	346	32,581
January 1947	29	8	781	47	32	614	19	789	3	219	467	39	.....	64	.....	119	1	49	140	27	3,447
Oklahoma..... Year 1946	14	.....	4316	28	49	2092	45	3277	20	430	1677	24	.....	167	.....	395	.....	144	624	44	13,348
January 1947	.....	.....	290	2	2	168	2	218	1	47	119	1	.....	7	.....	36	.....	16	41	1	951
Oregon..... Year 1946	12	1	1905	120	34	1191	85	1508	9	383	930	56	.....	104	17	396	.....	115	506	93	7,485
January 1947	2	.....	184	5	3	58	6	105	.....	48	62	1	.....	7	1	30	.....	4	27	8	551
Pennsylvania....Year 1946	610	693	8630	376	141	6883	393	6132	6	1779	5250	443	.....	936	104	1808	.....	940	2503	387	38,014
January 1947	65	61	825	48	19	654	33	630	4	218	439	50	7	67	10	119	10	93	138	9	3,499
Rhode Island....Year 1946	155	8	735	24	67	431	6	411	1	74	317	13	.....	17	11	82	.....	43	188	23	2,606
January 1947	23	1	106	6	11	42	2	69	1	17	31	5	.....	1	2	8	.....	8	6	1	340
South Carolina...Year 1946	14	1	2793	23	12	1240	29	1950	4	282	712	49	.....	197	.....	422	.....	118	514	65	8,405
January 1947	1	.....	212	2	.....	134	3	240	.....	39	68	8	.....	27	.....	31	.....	14	66	8	853
South Dakota....Year 1946	4	.....	855	56	11	569	5	621	23	136	678	17	.....	58	.....	126	.....	20	265	11	3,458
January 1947	.....	.....	39	1	.....	27	.....	41	3	5	23	.....	.....	1	.....	5	.....	2	12	1	160
Tennessee..... Year 1946	4	16	5073	55	34	2380	156	3547	4	658	1873	80	.....	178	2	503	.....	217	734	89	15,603
January 1947	3	2	593	14	7	298	14	505	1	131	250	8	.....	29	.....	48	.....	22	56	3	1,984
Texas..... Year 1946	5	5	12426	190	67	6164	131	10971	4	1519	4855	133	.....	334	.....	1405	.....	711	2116	189	41,275
January 1947	.....	1	1195	28	6	604	5	1061	.....	224	488	23	1	52	.....	119	.....	74	129	13	4,023
Utah..... Year 1946	1	.....	800	24	19	373	27	561	10	154	378	12	.....	6	2	137	.....	18	120	38	2,680
January 1947	.....	.....	149	4	6	46	7	83	1	36	41	.....	.....	.....	.....	27	.....	3	10	.....	413
Vermont..... Year 1946	8	20	563	12	5	409	26	531	2	88	331	20	.....	57	.....	71	.....	13	304	21	2,492
January 1947	1	7	80	3	.....	40	5	62	2	23	42	5	1	15	1	6	.....	3	21	1	318
Virginia..... Year 1946	175	49	4659	68	70	1860	77	3379	4	455	1568	78	.....	175	1	394	.....	186	923	103	14,224
January 1947	17	5	551	12	5	194	11	411	.....	86	144	10	.....	34	.....	35	.....	25	71	24	1,635
Washington..... Year 1946	11	.....	2480	82	71	1426	38	2014	9	357	1213	67	.....	126	20	603	.....	72	434	125	9,148
January 1947	1	.....	284	12	3	130	1	187	2	83	89	2	.....	18	.....	53	.....	3	16	7	891
West Virginia....Year 1946	29	25	1661	58	45	1147	81	1436	15	345	678	41	.....	147	1	213	.....	131	529	57	6,639
January 1947	5	14	221	12	3	169	8	184	13	84	82	1	.....	18	.....	42	.....	10	71	1	938
Wisconsin..... Year 1946	29	8	4028	169	141	1980	88	2620	78	533	1907	29	.....	270	21	498	.....	184	888	145	13,610
January 1947	.....	.....	392	24	12	163	9	219	9	64	148	3	4	36	.....	36	.....	30	44	5	1,198
Wyoming..... Year 1946	1	.....	696	32	5	310	9	501	7	55	324	2	.....	29	.....	96	.....	26	179	14	2,286
January 1947	.....	.....	62	6	.....	30	.....	51	.....	7	34	.....	.....	4	.....	12	1	4	18	.....	229
Total..... Year 1946	4755	3683	171618	5093	3734	96490	4557	131469	585	25645	78392	4687	.....	10489	510	25360	.....	10117	42135	5930	625,249
† 44 States, January 1947	287	224	15,153	618	266	7510	293	11,814	69	3176	5996	359	13	972	28	1881	18	708	2081	308	51,772

* Data from R. L. Polk & Co. † Louisiana, Maine, Missouri & New York missing.

STATISTICS . . . TRUCK AND TRAILER

NEW TRUCK REGISTRATIONS BY MAKES, BY YEARS*

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941††	1942‡	1946
Autocar	1,015	1,127	1,139	1,001	1,451	2,181	1,617	2,044	1,955	2,510	319	4,755
Brockway	752	875	1,213	1,245	1,695	1,593	1,303	1,815	1,672	2,294	171	3,683
Chevrolet	60,784	99,880	157,507	167,129	204,344	183,674	119,479	169,457	194,038	212,797	11,250	171,618
Diamond T	2,250	4,139	5,440	6,454	8,750	8,118	4,393	5,412	6,358	6,077	530	5,093
Divco	.....	200	254	398	964	1,125	1,229	1,481	1,662	2,306	180	3,734
Dodge	8,744	28,034	43,252	61,438	85,295	64,098	33,656	48,049	54,615	62,925	4,736	96,490
Federal	1,167	1,360	1,962	2,190	2,930	2,339	1,370	1,837	1,617	1,611	175	4,557
Ford	66,937	62,397	128,250	185,848	177,244	189,376	100,959	128,889	162,333	174,024	11,050	131,469
F. W. D.	.....	71	156	212	369	435	274	182	252	280	75	585
G. M. C.	6,359	6,602	10,449	11,442	26,880	43,522	20,152	34,908	42,436	45,703	3,429	25,645
Hudson	.....	.....	.....	638	1,905	4,823	719	409	761	736	33	2,543
Indiana	957	1,252	729	862	1,705	1,371	435	178	.....	.....	.....	.....
International	15,752	26,658	31,555	53,471	71,958	76,174	55,836	66,048	77,891	92,482	7,316	78,392
Mack	1,425	1,652	1,830	1,515	4,226	5,513	4,406	6,670	7,754	9,468	767	4,687
Plymouth	.....	.....	.....	660	2,420	13,709	6,652	8,294	9,573	7,732	137	28
Reo	3,187	3,042	5,035	5,101	4,227	4,254	2,929	853	625	1,543	156	10,489
Sterling	227	108	134	174	277	311	267	326	341	400	37	510
Stewart	867	684	736	880	1,280	1,148	390	70	.....	.....	.....	.....
Studebaker	2,430	1,872	1,697	2,100	3,279	5,129	2,000	2,110	1,207	5,078	394	25,360
White	2,138	1,384	3,963	3,304	5,757	5,933	3,514	4,558	7,344	9,271	933	10,117
Willys	1,132	233	25	2,280	2,441	1,122	1,889	1,634	2,291	2,031	98	42,135
All Others	4,290	4,299	3,560	2,291	2,147	2,301	1,880	1,524	1,552	1,429	158	3,359
Total	180,413	245,869	403,886	510,683	611,644	618,249	365,349	486,748	576,327	640,697	41,944‡	625,249

* Data from R. L. Polk & Co. Data for the 1943 and 1944 and 1945 War Years were not compiled. †† Does not include Federal Government registrations which are included to previous years. ‡ First three months only. Does not include Connecticut for month of March.

TOTAL TRUCK REGISTRATIONS BY STATES

	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Alabama	29,838	34,101	38,989	44,272	53,070	50,780	54,947	58,707	65,909	66,026	65,606	67,723	72,141	85,902
Arizona	14,569	16,791	17,964	20,183	22,973	22,998	24,083	25,243	26,689	28,093	27,020	27,211	29,462	35,044
Arkansas	32,980	35,700	40,107	50,131	59,263	53,789	60,535	66,158	77,191	75,267	71,916	74,459	78,902	94,450
California	220,087	237,566	253,908	*‡266,379	*‡284,132	*‡300,483	*‡309,855	*‡326,998	*‡350,261	*‡344,566	*‡327,204	‡327,375	‡355,282	‡406,729
Colorado	27,433	27,858	28,430	*31,930	32,795	31,447	30,636	30,298	31,044	31,784	†68,687	70,524	76,837	90,543
Connecticut	52,564	55,878	62,232	60,653	68,070	63,910	66,273	74,456	79,256	54,918	61,423	60,896	58,861	66,202
Delaware	*8,485	*9,394	*9,692	*10,010	*10,314	*10,519	*11,248	*11,030	*13,969	*13,416	*13,576	*14,371	13,162	14,296
District of Col.	16,742	17,263	17,610	19,397	18,862	14,267	13,718	13,928	13,809	14,646	15,037	13,563	13,879	14,495
Florida	45,019	55,359	57,199	65,738	70,308	71,871	76,320	79,790	87,706	80,919	84,132	88,053	96,384	120,525
Georgia	51,212	60,262	66,079	73,269	78,803	76,154	85,520	91,321	99,506	96,655	93,817	97,553	104,650	126,403
Idaho	14,884	17,861	21,371	25,852	28,208	27,809	31,380	33,538	36,515	34,807	35,724	‡35,533	38,352	40,000
Illinois	*166,186	*174,265	*185,477	*208,926	*220,639	*222,582	*232,888	*228,889	*234,703	*233,386	*221,634	216,930	224,929	262,000
Indiana	116,361	122,791	132,767	131,767	140,292	122,168	129,695	134,215	135,834	138,648	124,195	137,252	137,809	175,412
Iowa	69,490	75,350	80,529	82,840	86,636	*92,884	*93,139	*101,244	*108,985	*103,487	*103,509	98,373	102,176	115,984
Kansas	*72,404	75,565	*80,068	*87,113	*93,046	*97,744	*98,616	102,665	113,872	119,725	119,168	121,819	129,353	146,897
Kentucky	32,111	37,445	43,613	51,840	59,341	63,373	69,629	75,891	81,663	77,412	73,107	78,603	82,017	94,000
Louisiana	42,007	44,779	59,398	76,251	80,630	80,167	84,475	81,793	93,305	73,638	70,691	72,015	78,256	98,117
Maine	35,271	37,693	38,079	39,276	43,171	42,663	41,673	43,914	45,748	42,074	41,959	44,527	49,891	59,496
Maryland	34,728	45,351	48,528	53,398	52,014	53,926	58,027	59,160	60,876	60,627	61,672	53,319	65,090	77,195
Massachusetts	99,854	98,508	100,411	102,400	104,316	104,134	106,624	109,462	110,650	109,783	104,253	▲103,606	▲111,417	▲131,071
Michigan	*121,639	*123,405	*127,283	*139,520	*146,117	*139,630	*147,360	*152,735	*163,264	*151,053	*158,656	156,174	167,677	194,546
Minnesota	99,130	103,882	105,861	114,448	117,632	115,970	118,227	124,602	129,719	123,213	116,026	113,666	115,906	131,607
Mississippi	32,924	34,115	33,306	43,357	53,072	51,486	57,097	60,827	64,119	61,744	60,900	65,780	68,988	77,500
Missouri	*103,795	107,709	115,819	*128,425	*134,457	*133,666	*141,609	*152,924	*164,546	*159,342	148,608	143,867	157,084	188,394
Montana	*27,480	*31,087	*35,542	*39,311	*40,081	*41,138	*44,480	*47,964	*51,476	*46,695	*45,380	46,730	48,260	54,947
Nebraska	53,947	56,560	59,054	62,133	63,667	66,988	65,632	68,016	71,283	70,328	71,726	72,544	75,554	87,121
Nevada	5,927	6,391	6,875	*7,680	*8,092	*7,525	5,811	6,571	9,524	10,037	9,850	9,520	9,193	10,778
New Hampshire	19,872	22,382	23,455	*22,023	23,768	*23,597	*24,964	30,062	32,118	32,569	*27,195	27,240	23,483	31,744
New Jersey	122,228	123,351	124,866	130,642	134,458	132,714	132,819	137,126	141,329	140,928	135,529	138,937	149,000	164,381
New Mexico	15,290	16,112	18,245	22,731	31,117	26,915	28,488	30,090	30,806	28,559	28,645	27,826	29,640	35,028
New York	298,508	298,379	306,819	326,404	333,543	327,474	350,693	363,110	348,819	330,323	310,258	282,091	354,052	373,625
North Carolina	49,660	54,766	57,931	65,000	73,383	74,211	81,068	87,457	96,320	93,922	95,600	93,063	97,500	123,748
North Dakota	*25,342	26,315	28,780	29,650	32,084	33,061	34,544	37,019	40,788	41,935	44,397	46,946	49,262	53,868
Ohio	*158,189	*159,845	*170,954	*172,273	*180,484	*177,314	*184,223	*190,654	*192,000	*193,325	185,596	144,484	196,810	228,000
Oklahoma	65,957	73,928	82,855	90,638	98,675	92,943	98,172	103,391	107,903	109,586	101,969	102,383	109,896	128,124
Oregon	32,208	41,411	42,584	49,746	60,660	59,829	62,749	67,756	75,538	75,217	74,724	77,273	82,408	99,025
Pennsylvania	219,497	215,016	229,026	249,637	257,330	255,654	269,062	263,112	274,967	274,745	275,052	276,072	304,972	337,232
Rhode Island	17,965	18,332	18,428	19,458	19,768	20,010	19,699	20,743	21,174	21,876	20,575	20,985	22,607	26,500
South Carolina	17,795	20,877	29,761	33,525	39,835	41,379	44,142	39,070	50,638	48,341	49,257	45,701	48,047	64,158
South Dakota	22,764	23,832	26,931	28,172	28,768	28,494	30,282	32,298	34,952	34,856	35,028	35,590	37,149	42,163
Tennessee	33,848	37,755	42,031	49,368	55,736	61,724	67,053	70,667	81,022	74,285	71,701	73,650	77,134	99,517
Texas	188,676	226,276	257,055	285,839	294,659	316,757	335,467	350,208	368,863	297,526	287,223	286,669	307,855	365,000
Utah	16,348	17,103	17,587	22,000	21,094	22,432	25,209	23,534	24,208	24,905	25,549	25,836	28,748	31,267
Vermont	7,924	8,612	9,031	8,682	9,029	9,042	9,576	9,628	10,327	9,858	10,207	10,806	11,667	13,555
Virginia	57,266	57,268	60,376	67,689	67,547	66,410	68,723	74,720	83,594	83,048	80,878	82,912	94,286	116,084
Washington	62,548	64,321	68,657	79,500	84,577	83,204	85,494	93,395	94,772	93,517	94,042	96,168	103,762	117,173
West Virginia	33,415	27,253	29,305	36,908	44,556	43,785	48,289	51,520	49,541	49,321	47,124	51,381	55,512	66,612
Wisconsin	104,347	120,180	130,144	150,779	145,822	135,413	141,590	147,661	158,087	143,087	135,643	139,186	142,240	160,940
Wyoming	10,643	13,102	14,593	15,592	17,368	17,589	18,090	19,062	20,474	20,192	20,014	20,472	21,436	23,896
TOTALS	3,227,357	3,409,335	3,655,705	3,981,755	4,107,244	§4,210,022	§4,419,893	§4,604,772	§4,859,653	§4,644,210	§4,549,882	4,518,157	4,906,578	5,698,294

* Includes buses. § Revised. † Large increase due to reclassification of trucks previously carried as passenger cars. ‡ Includes light commercial vehicles registered as passenger cars. Includes taxicabs. ▲ Includes trailers and semi-trailers.

NEW TRUCK REGISTRATIONS (U. S.), BY MONTHS, BY YEARS*

	1933	1934	1935	1936	1937	1938	1939	1940	1941††	1942§	1943§	1944§	1945§	1946	
January	11,709	22,903	34,759	43,760	47,618	31,995	37,715	45,650	50,830	23,356	4,627	8,577	17,650	.....	January
February	9,707	24,476	34,797	40,301	41,843	27,551	34,102	41,336	50,124	10,311	6,083	6,231	17,676	.....	February
March	9,934	33,884	41,511	52,428	60,301	37,255	45,083	53,093	62,413	8,277	8,280	6,726	19,710	87,375•	March
April	17,301	38,882	46,785	64,956	67,832	35,682	46,063	55,982	64,238	17,497	7,019	11,390	19,718	40,920	April
May	20,925	39,831	47,968	62,183	65,857	32,937	45,381	51,553	64,177	12,473	8,025	14,807	26,663	56,285	May
June	23,254	34,768	48,243	56,851	58,626	30,647	40,482	43,504	62,265	9,535	7,287	15,263	28,759	46,488	June
July	30,642	37,490	51,243	63,695	61,686	33,475	44,747	50,913	67,412	9,756	8,474	10,728	34,431	53,657	July
August	28,799	40,790	50,355	59,222	60,872	34,231	43,523	48,980	56,191	7,615	9,254	18,044	227,628	62,820	August
September	31,269	37,225	41,390	54,611	54,711	26,570	32,983	39,224	43,892	8,956	8,454	12,386	‡	69,565	September
October	28,058	40,878	37,439	41,220	40,246	19,589	37,923	48,356	41,352	8,336	6,473	12,802	‡	74,708	October
November	18,691	28,689	36,935	30,225	27,248	23,943	41,286	46,618	36,799	4,854	5,007	12,981	‡	63,978	November
December	15,580	24,070	39,258	42,192	31,409	31,474	37,460	51,095	41,006	4,744	2,094	16,730	‡	69,453	December
Total	245,869	403,886	510,683	611,644	618,249	365,349	486,748	576,327†	640,698	125,710§	81,077§	146,465§	392,233§	625,249	Total

† Contains 23 delinquent registrations which cannot be assigned to any one month. †† Does not include Federal Government deliveries which are included in other years. • Source:—R. L. Polk & Co. § R. L. Polk & Co. new registrations for first three months of 1942. Remainder of 1942 and entire years of 1943, 1944 and 1945 are Commercial Trucks Rationed on Government Exemption Permits and Certificates of Transfer by WPB and ODT. It is assumed that all certificates were cashed. ‡ Certificates no longer issued and therefore no record of permits or sales. • Total for Jan., Feb. and March.

TOTAL U. S. TRUCK REGISTRATIONS, BY YEARS (1904-1946)

		% Gain			% Gain			% Gain			% Gain			% Gain
1904	410		1912	41,400	107	1920	1,006,082	27	1929	3,379,854	8	1938	4,210,022	2.5
1905	600	46	1913	63,800	54	1921	1,117,100	11	1930	3,486,019	3	1939	4,419,893	5.0
1906	1,100	83	1914	85,600	34	1922	1,375,725	23	1931	3,466,571	−.6	1940	4,604,772	4.2
1907	1,700	55	1915	136,000	59	1923	1,612,569	17	1932	3,229,315	−.7	1941	4,859,653	5.5
1908	3,100	82	1916	215,000	58	1924	2,134,724	32	1933	3,227,357	−0.6	1942	4,644,210	−4.4
1909	6,050	95	1917	326,000	52	1925	2,440,854	14	1934	3,409,335	5.5	1943	4,549,882	−2.0
1910	10,000	65	1918	525,000	61	1926	2,764,222	13	1935	3,655,705	7.1	1944	4,518,157	−0.7
1911	20,000	100	1919	794,372	51	1927	2,914,019	5	1936	3,981,755	9.1	1945	4,906,578	8.8
						1928	3,113,999	7	1937	4,107,244	3.1	1946	5,698,294	16.0

TRUCK PRODUCTION (U. S.) BY MONTHS, BY YEARS*

	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942†	1943†	1944†	1945†	1946
January	18,992	42,912	62,174	66,250	70,109	53,823	60,703	69,392	89,645	93,181	49,612	58,827	67,394	45,033
February	15,319	43,482	58,655	63,331	67,405	47,151	60,220	66,276	91,109	77,269	47,548	55,916	64,510	34,933
March	17,803	59,160	66,503	78,052	90,242	47,580	72,243	70,698	97,638	89,537	55,979	56,695	75,057	37,666
April	26,677	64,620	65,778	86,243	96,170	43,032	63,966	70,607	87,293	64,157	56,173	56,071	67,579	80,771
May	33,760	56,691	55,560	75,591	91,487	37,101	69,672	65,539	101,072	61,064	55,190	57,287	71,267	75,373
June	42,130	45,197	62,158	77,631	85,898	38,139	63,034	58,596	101,542	73,732	56,516	61,479	66,456	60,038
July	38,092	41,839	57,765	68,809	78,568	31,602	58,621	62,934	100,495	63,885	60,285	61,921	54,563	87,591
August	41,441	51,311	56,270	61,923	82,874	31,870	38,461	29,050	69,072	59,526	61,321	69,015	44,779	97,881
September	34,424	44,967	31,443	45,064	52,542	18,375	27,132	44,638	66,465	59,857	57,582	65,605	31,572	95,682
October	29,813	47,988	58,733	34,446	31,214	22,018	61,573	72,009	86,441	58,743	60,160	64,723	42,225	107,166
November	18,318	34,462	58,145	53,902	64,727	52,069	66,533	80,261	96,246	51,628	57,168	69,497	53,634	100,929
December	29,776	42,563	61,506	73,345	81,849	62,340	78,338	87,036	107,243	54,685	59,533	72,165	29,542	107,616
Total	346,545	575,192	694,690	784,597	893,085	488,100	710,496	777,026	1,094,261	805,264	677,115	749,201	668,578	930,739

• Bureau of Census data for 1933 through 1941 and representing factory sales. WPB records for 1942 through 1945. † These data cover actual production of trucks for military and civilian use. Jeeps, military ambulances and all wheel-drive personnel carriers are included. To these have been added integral buses except for 1945, bus data for which were not available.

TRUCK PRODUCTION (U. S.) BY CAPACITIES, 1936-1946

	TOTAL All Weights			LIGHT Under 9000 lb. G.V.W.			MEDIUM 9,000 to 15,999 lb. G.V.W.			HEAVY 16,000 lb. and Over		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
1936	770,629	2,725	773,354	317,189	1,004	318,193	417,395	1,125	418,520	36,045	596	36,641
1937	872,118	1,703	873,821	396,326	368	396,694	437,525	1,266	438,791	38,267	69	38,336
1938	478,307	2,248	480,555	208,575	690	209,265	248,886	1,119	250,005	20,846	439	21,285
1939	685,296	6,188	691,484	306,098	1,651	307,749	343,190	2,900	346,090	36,008	1,637	37,645
1940	700,101	55,389	755,490	337,983	13,365	351,348	323,088	36,042	359,130	39,030	5,982	45,012
1941	823,205	218,657	1,041,862	367,467	72,164	439,631	408,367	128,170	536,537	47,371	18,323	65,694
1942	125,294	671,633	796,927	23,427	277,413	300,840	86,072	169,188	255,260	15,795	225,032	240,827
1943	2,888	672,614	675,502	0	268,438	268,438	179	154,808	154,987	2,709	249,368	252,077
1944	119,081	624,669	743,750	0	247,113	247,113	87,990	87,380	175,370	31,091	290,176	321,267
1945	313,643	354,935	668,578	72,197	132,574	204,771	183,948	24,232	208,180	57,498	198,129	255,627
1946•	.....	.....	930,739	.....	.....	418,965	.....	.....	448,486	.....	.....	63,288

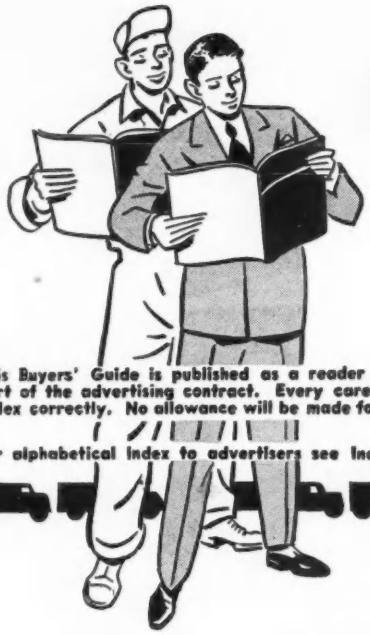
Source—War Production Board, Automotive Division. These data cover actual production of trucks for civilian and military uses. They differ from the "factory sales" figures accepted as an index of production before the war. Jeeps, military ambulances and wheel drive personnel carriers are included; half-tracks, armored cars and integral buses are excluded. • Source—Automobile Manufacturers Association. Not comparable with other years as light trucks are under 10,000 lb., medium are 10,000 to 16,000 lb.

TRUCKS MANUFACTURED IN 43 YEARS

(U. S. Truck Factory Sales & Their Wholesale Value)

Year	Units	Wholesale Value	Year	Units	Wholesale Value	Year	Units	Wholesale Value
1904	700	$ 1,272,747	1919	224,731	$371,422,820	1934	575,192	$320,143,667
1905	750	1,330,000	1920	321,789	423,249,410	1935	694,690	379,407,751
1906	800	1,440,000	1921	149,052	166,070,810	1936	784,587	462,820,474
1907	1,000	1,780,000	1922	269,991	226,049,658	1937	893,085	542,921,096
1908	1,500	2,550,000	1923	409,295	308,537,929	1938	488,100	339,226,639
1909	3,297	5,333,683	1924	416,659	318,580,580	1939	710,496	502,421,776
1910	6,000	9,660,000	1925	530,659	458,400,277	1940	754,901	577,012,000
1911	10,681	21,000,000	1926	316,947	452,123,435	1941	1,060,820	1,087,592,000
1912	22,000	43,000,000	1927	464,793	420,130,624	1942	818,662	1,436,162,000
1913	23,500	44,000,000	1928	543,342	437,132,258	1943	699,689	1,453,467,000
1914	24,900	44,219,096	1929	771,020	566,029,644	1944	737,524	1,712,356,000
1915	74,000	125,800,000	1930	571,241	389,436,690	1945	655,683	1,219,957,000
1916	92,130	161,000,000	1931	416,649	262,417,542	1946	940,830	‡1,158,000,000
1917	128,157	220,982,668	1932	235,187	136,193,336			
1918	227,250	434,168,992	1933	346,545	186,069,314	43 Years	16,417,823	$17,430,918,916

‡ Partly estimated.



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AXLES, REAR
Clark Equipment Co.
Detroit Automotive Products Corp.
F. A. B. Mfg. Co.
Grico Two-Axle Drive Co.
Hendrickson Motor Truck Co.
Little Giant Products Co.
Timken-Detroit Axle Co.
Truckstell Corp.
Trucktor Corp.

AXLES, TRAILER
Clark Equipment Co.
Shuler Axle Co.

AXLE HOUSINGS
Clark Equipment Co.

AXLE SHAFTS, REAR
U. S. Axle Co.

BACKS, TRUCK
Zehr Products Corp.

BATTERIES
Auto-Lite Battery Corp.
Bowers Battery & Spark Plug Co.
Edison, Inc., Emark Div., Thomas A.
Electric Auto-Lite Co.
Electric Storage Battery Co.
Globe-Union, Inc.
Goodyear Tire & Rubber Co.
Willard Storage Battery Co.

BATTERY CABLE
Belden Mfg. Co.
Bowes "Seal Fast" Corp.
Crescent Co.

BATTERY CARRIERS
Bishman Mfg. Co.
General Electric Co.
Murray Corp.

BATTERY HANGERS
Murray Corp.

BATTERY HOLD-DOWNS
Murray Corp.

BATTERY JUG FILLERS
Bishman Mfg. Co.

BEARINGS
Bower Roller Bearing Co.
Clawson & Bals, Inc.
Federal-Mogul Service
Marlin-Rockwell Corp.
Monmouth Products Co.
SKF Industries, Inc.
Thompson Products
Timken Roller Bearing Co.

BELTS
Gates Rubber Co.
United States Asbestos Div. Raybestos-Manhattan, Inc.

BODIES
American Coach & Body Co.
Commercial Body Div. Electric Boat Co.
Galion Allsteel Body Co.
Gar Wood Industries, Inc.
Marion Metal Products Co.
Oltman-O'Neill Co.
Perfection Steel Body Co.
St. Paul Hydraulic Hoist Div. Gar Wood Industries, Inc.
York-Hoover Corp.

BODIES, PREFABRICATED
Brown Industries
Krieger Steel Sections, Inc.
Lindsay Corp.
Midwest Equipment Co.
Parish Pressed Steel Co.
Reynolds Metals Co.

BODY PANELS
Hart Pressed Steel Corp.
Haskelite Mfg. Co.

BODY PARTS
Hart Pressed Steel Corp.

BOLTS, KING
Monmouth Products Co.

BORING MACHINES, BEARING
Tobin-Arp Mfg. Co.

BORING MACHINE ATTACHMENTS, BEARING
Tobin-Arp Mfg. Co.

BRAKES
American Chain & Cable Co.
Bendix-Westinghouse Automotive Air Brake Co.
Midland Steel Products Co.
Minnesota Automotive, Inc.
New York Air Brake Co.
Shuler Axle Co.
Wagner Electric Corp.

BRAKE BOOSTERS
Bendix Products Div. Bendix Aviation Corp.
Kelsey-Hayes Wheel Co.
Roadmaster Products Co.

BRAKE CABLE
Eis Automotive Corp.

BRAKE COUPLINGS
Linett Auto Supply

BRAKE CYLINDERS
Wagner Electric Corp.

BRAKE DRUMS
Dayton Steel Foundry Co.
Shuler Axle Co.

BRAKE DRUM LATHES
Barrett Equipment Co.

BRAKE DRUM SANDERS
Barrett Equipment Co.

BRAKE FLUID
Bell Co.
Eis Automotive Corp.
Puritan Co.
Wagner Electric Corp.

BRAKE HOSE
Clawson & Bals, Inc.

BRAKE LIMITING VALVES, FRONT WHEEL
Hydraulic Specialties Co.

BRAKE LINING
American Brake Shoe Co.
Gatke Corp.
Grizzly Mfg. Co.
Johns-Manville
Miley Co., L. J.
Molded Materials Div. Pharis Tire & Rubber Co.
Scandinavia Belting Co.
Thermoid Co.
U. S. Asbestos Div. Raybestos-Manhattan, Inc.
World Bestos Corp.

BRAKE PARTS
Clawson & Bals, Inc.
Eis Automotive Corp.
Wagner Electric Corp.

BRAKE RELINING MACHINES
Barrett Equipment Co.

BRAKE TOOLS
Eis Automotive Corp.

BREAKER ARMS
Standard Motor Products, Inc.

BRUSHES, TRUCK WASHING
Flour City Brush Co.
Laitner & Sons, A
Milwaukee Dustless Brush Co.

BUSES
Available Truck Co.

BUSHINGS
Perfect Parts, Inc.

CABLE
Belden Mfg. Co.
Crescent Co.
Electric Auto-Lite Co.
Standard Motor Products, Inc.
Whitaker Cable Corp.

CARBURETORS
Zenith Carburetor Div. Bendix Aviation Corp.

CARBURETOR PARTS & KITS
Hygrade Products Co.

CEMENT, CYLINDER BLOCK & RADIATOR
Lusk Co., C. F.
Miller Mfg. Co.

CLEANING COMPOUNDS
Bendix Products Div. Bendix Aviation Corp.
Drew & Co., E. F.
Hollingshead Corp., R. M.
Kelite Products, Inc.
Solrun Services, Inc.
Warner-Paterson Co.

CLEANING SYSTEMS, PARTS
Gray-Mills Corp.

CLEANING UNITS, FLOOR (STEAM)
Homestead Valve Mfg. Co., Hypressure Jenny Div.

CLEANING UNITS, TRUCK (STEAM)
Curtis Pneumatic Machinery Div. Curtis Mfg. Co.
Homestead Valve Mfg. Co., Hypressure Jenny Div.
Oakite Products, Inc.

CLUTCHES
Lipe-Rollway Corp.
Long Mfg. Div. Borg-Warner Corp.

CLUTCH FACING
U. S. Asbestos Div. Raybestos-Manhattan, Inc.

COATINGS, PROTECTIVE, TRUCK (UNDER-SURFACES)
Minnesota Mining & Mfg. Co.

COILS, IGNITION
Niehoff & Co., C. E.
Standard Motor Products, Inc.

CONDENSERS
Standard Motor Products, Inc.

CONNECTING RODS
Clawson & Bals, Inc.

CORNER IRONS
Cleveland Hardware & Forging Co.

COUPLERS
Holland Hitch Co.

COVERS, TRUCK
Mt. Vernon-Woodberry Mills.

CRANES, FLOOR
Ruger Equipment Co.

CRANES, MOBILE
Silent Hoist & Crane Co.

CRANES, TRUCK
Silent Hoist & Crane Co.

CYLINDER HEAD STUDS
Lamson & Sessions Co.

CYLINDER HEAD SLEEVES & ASSEMBLIES
Allied Motor Parts Co.

DECALOMANIAS
Decalcomania Specialties Co.
Excello Specialty Co.
Palm Bros.
Permalux Co.

GUIDE

numerous products needed for the operation and contain a convenient, classified list of equipment, this issue, and the names of their manufacturers

DERRICKS, TRUCK
Silent Hoist & Crane Co.

DESKS, FOREMAN'S
Standard Pressed Steel Co.

DIESEL FUEL
Standard Oil Co. (Ind.)

DIESEL FUEL INJECTION EQUIPMENT
American Bosch Corp.

DIFFERENTIALS
Detroit Automotive Products Corp.

DIRECTIONAL SIGNALS
Signal-Stat Corp.
Teleoptic Co.

DISTRIBUTORS
Niehoff & Co., C. E.

DISTRIBUTOR-GOVERNOR COMBINATIONS
Mallory Electric Corp.

DOLLIES
Claybourne Distributors, Ltd.
Techtman Industries.

DOORS, ROLLING (TRUCK & BUILDING)
Kinnear Mfg. Co.

DRAG LINKS
Monmouth Products Co.

DRILL GRINDING ATTACHMENTS
T & H Mfg. Co.

DRIVE PARTS
Eclipse Machine Div. Bendix Aviation Corp.

DRIVE SHAFT ASSEMBLES
Almetal Universal Joint Co.

DUMP UNITS, TRUCK
Heil Co.
St. Paul Hydraulic Hoist Div. Gar Wood Industries, Inc.

ELECTRIC GENERATING SETS
Duplex Truck Co.

ELECTRICAL PRODUCTS
American Bosch Corp.
Delco-Remy Div., General Motors Corp.

ELECTRICAL SERVICE EQUIPMENT
Weidenhoff, Inc., Joseph.

ELECTRODES
International Nickel Co.
Marquette Mfg. Co.

ENAMELS
Ditzler Color Div., Pittsburgh Plate Glass Co.

ENGINES
Buda Co.
Continental Motors Corp.
Cummins Engine Co.
Hall-Scott Motor Car Co.
Waukesha Motor Co.

ENGINE CONDITIONING TEST GAGES
Griswold Mfg. Co., F. T.

EXPANSION PLUGS
Allied Motor Parts Co.

FANS, ENGINE
Evans Products Co., Thermo-Aire Div.

FAN BELTS—See BELTS

FASTENERS, AUTOMOTIVE
Lamson & Sessions Co.

FIFTH WHEELS
American Steel Foundries
Dayton Steel Foundry Co.
Fontaine Truck Co.

FIFTH WHEEL PLATFORMS
Pollard Co., C. E.

FINISHES, AUTOMOTIVE
Martin-Senour Co.

FIRE EXTINGUISHERS
Buffalo Fire Appliance Corp.
General Detroit Corp.

FITTINGS, TUBE
Hygrade Products Co.
Imperial Brass Mfg. Co.

FLARES
Grote Mfg. Co.

FLEXIBLE SHAFTING
Stow Mfg. Co.

FRAME EXTENSIONS
Little Giant Products Co.

FRONT END & FRAME SERVICE EQUIPMENT
Bear Mfg. Co.

FUEL FILTERS
Carter Carburetor Corp.
Hygrade Products Co.

FUEL LINES
Hygrade Products Co.

FUEL PARTS & KITS
Hygrade Products Co.

FUEL PUMPS
AC Spark Plug Div.
Airtex Automotive Div.
Autopulse Corp.
Hygrade Products Co.
Stewart-Warner Corp.

FUSES & RECEPTACLES
Signal-Stat Corp.

GASKETS
Felt Products Mfg. Co.
Fitzgerald Mfg. Co.
Victor Mfg. & Gasket Co.

GASOLINE
Standard Oil Co. (Ind.)

GASOLINE TANK PRESSURE CAPS
Charter Oak Co.

GEAR LUBRICANT PUMPS—See LUBRICATORS

GEARS
Clark Equipment Co.

GENERATORS
Electric Auto-Lite Co.

GENERATOR CUTOUTS
P & D Mfg. Co.

GLASS, SAFETY
Libbey-Owens Ford Glass Co.
Pittsburgh Plate Glass Co.

GOVERNORS
Hoof Products Co.
King-Seeley Corp.
Mallory Electric Corp.

GREASE
Ohio Oil Co.
Sinclair Refining Co.
Socony-Vacuum Oil Co.

HANDLES, TRUCK BODY
Eberhard Mfg. Co.

HARD-FACING ALLOYS
Air Reduction

HARDWARE, TRUCK BODY
Eberhard Mfg. Co.
Hansen Mfg. Co., A. L.

HEATERS, TRUCK-CAB
Evans Products Co., Thermo-Aire Div.

HINGES, DOOR (TRUCK BODY)
Eberhard Mfg. Co.

HITCHES—See COUPLERS

HOISTS, TRUCK BODY
Galion Allsteel Body Co.
Gar Wood Industries, Inc.
Marion Metal Products Co.
Perfection Steel Body Co.
St. Paul Hydraulic Hoist Div.

HORNS
Buell Mfg. Co.

HOSE ASSEMBLIES
Clawson & Bals, Inc.

HOSE CLAMPS
Murray Corp.

IGNITION POINT TOOLS
Lanagan & Hoke

JACKS
Auto Specialties Mfg. Co.
Blackhawk Mfg. Co.
Hein-Werner Corp.
Joyce-Cridland Co.
Walker Mfg. Co. of Wis.

JIGS
Hygrade Products Co.

KITS, MOTORISTS'
Speaker Corp., J. W.

LAMPS
American Automatic Devices Co.
Arrow Safety Device Co.
Do-Ray Lamp Co.
General Electric Co.
Grote Mfg. Co.
K-D Lamp Div., Noma Electric Corp.
Murray Corp.
Yankee Metal Products Corp.

LANDING GEARS
Dayton Steel Foundry Co.

LATHES, PRECISION
South Bend Lathe Works.

LETTERING, STENCIL METHOD
Ashley Quixign Co.

LIFTS
Curtis Pneumatic Machinery Div., Curtis Mfg. Co.

LIGHTS—See LAMPS

LIGHT RELAYS—See RELAYS, HORN & LIGHT

LOCK NUTS
Elastic Stop Nut Corp. of America

LOCKS, DOOR (TRUCK BODY)
Eberhard Mfg. Co.
Hansen Mfg. Co., A. L.

LUBRICATORS
Lincoln Engineering Co.
Stewart Warner Corp., Alemite Div.

LUGS
Crescent Co.

MAGNESIUM
American Magnesium Corp.

MIRRORS
Yankee Metal Products Corp.

OIL
Freedom-Valvoline Oil Co.
Gulf Oil Corp.
Lion Oil Co.
Ohio Oil Co.
Quaker State Oil Refining Co.
Sinclair Refining Co.
Sonneborn Sons, Inc., Amalie Div.
Standard Oil (Calif.)
Standard Oil Co. (Ind.)
Texas Co.
Wolf's Head Oil Refining Co.

OIL DRAINS, PORTABLE WASTE
Stewart-Warner Corp., Alemite Div.

OIL FILTERS
AC Spark Plug Div.
DeLuxe Products Corp.
Fram Corp.
Michiana Products Corp.
Purolator Products, Inc.
WGB Oil Clarifier, Inc.
Wix Accessories Corp.

OIL FILTER REFILLS
AC Spark Plug Div.
DeLuxe Products Corp.
Fram Corp.
Purolator Products, Inc.
Refill Filter Co.
WGB Oil Clarifier, Inc.
Wix Accessories Corp.

PARTS, CAR & TRUCK
Aluminum Industries, Inc.
Chrysler Corp., Parts Div.
Toledo Steel Products Co.

PISTONS
Allied Motor Parts Co.
Aluminum Co. of America
Clawson & Bals, Inc.
Ohio Piston Co.
Sealed Power Corp.
Zollner Machine Works.

PISTON GROOVE INSERTS
Sealed Power Corp.

PISTON PIN BUSHINGS
Allied Motor Parts Co.

PISTON PIN LOCK RINGS
Allied Motor Parts Co.

PISTON PIN SET SCREWS
Allied Motor Parts Co.

PISTON PINS
Allied Motor Parts Co.
Clawson & Bals, Inc.

PISTON RINGS
Hastings Mfg. Co.
Koppers Co., Piston Ring Div.
Perfect Circle Co.
Ramsey Corp.
Sealed Power Corp.
Wausau Motor Parts Co.
Wel-Ever Piston Ring Co.
Wilkening Mfg. Co.

PLATFORMS & RACKS, TRUCK
Monroe Mfg. Co., C. N.

POWER TAKE-OFFS
Spicer Mfg. Div. of Dana Corp.

PRESSES
Manley Mfg. Div. American Chain & Cable Co.

PULLERS
Bishman Mfg. Co.
Cal-Van Machine Products, Inc.
Owatonna Tool Co.
Universal Tire Tool Co.

PUMPS, DISPENSING
Bishman Mfg. Co.

RADIATORS
G & O Mfg. Co.

RADIATOR FLUSHING COMPOUNDS
Bowes "Seal Fast" Corp.

(Turn to next page, please)

Fleet Buyers Guide . . . (Continued from Page 109)

RADIATOR HOSE
U. S. Asbestos Div. Raybestos-Manhattan, Inc.

RADIATOR RUST PREVENTIVES (COMPOUNDS)
Warner-Patterson Co.

RADIATOR RUST PREVENTIVES (ELECTROLYTIC)
Butler Engineering Co.
Electromatic Engineering Co.

RADIATOR SEALING COMPOUNDS
Bowes "Seal Fast" Corp.

REAR AXLE STUD LOCKING RINGS
Champ-Items, Inc.

RECORDERS, TRUCK MOVEMENT
Knopf Instrument Co.
Service Recorder Co.
Wagner Electric Corp.

REFLECTORS
Grote Mfg. Co.
Yankee Metal Products Corp.

REFRIGERATION UNITS, TRUCK
Kold-Hold Mfg. Co.
Sterling Mfg. Co.
U. S. Thermo Control Co.

RELAYS, HORN & LIGHT
P & D Mfg. Co.
Standard Motor Products, Inc.

RIVETERS, RING GEAR
Hanley Mfg. Div. American Chain & Mfg. Co.

RUBBER LUBRICANTS
American Grease Stick Co.

SANDERS, HIGHWAY (TRUCK)
Highway Safety Appliances, Inc.

SANDERS, PORTABLE ELECTRIC
Albertson & Co.

SEAT CUSHION MATERIAL, TRUCK
U. S. Rubber Co.

SEAT SHOCK ABSORBERS
Houde Engrg. Div. Houdaille-Hershey Corp.

SEATS, TRUCK
Bostrom Mfg. Co.
Monroe Auto Equipment Co.

SHOCK ABSORBERS
Delco Products Div. General Motors Corp.

SHOCK LINKS, BUSHING & PARTS
Hygrade Products Co.

SNOW PLOWS
Frink, Mrs. Carl W.

SOLDER, CORED
Kester Solder Co.

SOLDER, LIQUID (COOLING SYSTEM)
Warner-Patterson Co.

SPARK PLUGS
Blue Crown Spark Plug Co.
Champion Spark Plug Co.
Edison-Splitdorf Corp.
Electric Auto-Lite Co.

SPARK PLUG CABLE
Belden Mfg. Co.
Electric Auto-Lite Co.

SPARK PLUG INSULATORS
Frenchtown Porcelain Co.

SPEEDOMETER CABLES, CASTINGS & PARTS
Hygrade Products Co.

SPRAYERS, PAINT
DeVilbiss Co.

SPRINGS, LEAF
Maremont Automotive Products, Inc.
Rowland, Inc., Wm. & Harvey.

SPRING SHACKLES
Clawson & Bals, Inc.

STARTING MOTORS
Electric Auto-Lite Co.

STEEL
Republic Steel Co.
Timken Roller Bearing Co.



STEERING BOOSTERS, POWER
Air-O-Matic Power Steer Co.
Vickers, Inc.

STEERING GEARS
Gemmer Mfg. Co.
Ross Gear Tool Co.

SURPLUS PROPERTY
War Assets Administration

SUSPENSION PARTS
Monmouth Products Co.
Moog Industries Inc.
Standard Forge & Axle Co.

SWITCHES
Murray Corp.
Niehoff & Co., C. E.
Signal-Stat Corp.
Standard Motor Products, Inc.

TACHOMETERS
Stewart Warner Corp.
Truckstell Corp.
Wagner Electric Corp.

TANKS, TRAILER & TRUCK BODY
Davisbilt Products Corp.

TANKS, TRUCK (FUEL SUPPLY)
Prior Products, Inc.
Snyder Tank Corp.

TANK VALVES, TRUCK
Shand & Jurs Co.

TAPPETS, VALVE
Eaton Mfg. Co., Wilcox-Rich Div.
Johnson Products, Inc.

TERMINALS
Bowes "Seal Fast" Corp.
Crescent Co.

TESTERS, ELECTRICAL EQUIPMENT
Electric Heat Control Co.
Weidenhoff, Inc.

THERMOSTATS
Dole Valve Co.

TIE RODS
Monmouth Products Co.

TIE ROD ENDS
Monmouth Products Co.

TIRES
Armstrong Rubber Co.
Cooper Tire & Rubber Co.
Dayton Rubber Co.
Firestone Tire & Rubber Co.
General Tire & Rubber Co.
Gillette Tires, Div. U. S. Rubber Co.
Kelly-Springfield Tire Co.
Miller Rubber Co.
Mohawk Rubber Co.
Pennsylvania Rubber Co.
Seiberling Rubber Co.
United States Rubber Co.

TIRE CARRIERS
T. E. D. Corp.

TIRE CHAINS
International Chain & Mfg. Co.

TIRE CAGES
Schrader's Son, Div. of Scovill Mfg. Co., A.

TIRE & TUBE PATCHES
Dill Mfg. Co.
Speaker Corp., J. W.

TIRE PLUGS
Speaker Corp., J. W.
Wedler-Shuford Co.

TIRE RECAPPING MATERIALS
Mohawk Rubber Co.

TIRE TOOLS
Bishman Mfg. Co.
Keel & Co.
Ken Tool Mfg. Co.
Universal Tire Tool Co.

TIRE VALVES
Speaker Corp., J. W.

TOOLS, HAND
Duro Metal Products Co.
Quality Tools Corp.

TOOL STANDS, PORTABLE
Standard Pressed Steel Co.

TOPS, TRUCK
Turk Corp., C. K.

TOWERS, TRUCK
Silent Hoist & Crane Co.

TRACTORS, TRUCK—See TRUCKS & TRACTORS

TRAILERS
American Bantam Car Co.
Available Truck Co.
Brown Industries
Edwards Iron Works, Inc.
Fruehauf Trailer Corp.
Gramm Trailer Corp.
Highway Trailer Co.
Kingham Trailer Co.
Steel Products Co.
Strick Co.
Trailmobile Co.
Truck Engineering Corp.

TRANSMISSIONS
Clark Equipment Co.
Fuller Mfg. Co.
Truckstell Corp.

TRUCKS & TRACTORS
Autocar Co.
Available Truck Co.
Dart Truck Co.
Diamond T Motor Car Co.
Dodge Div. Chrysler Corp.
Duplex Truck Co.
Federal Motor Truck Co.
Ford Motor Co.
Four Wheel Drive Auto Co.
International Harvester Co.
Kenworth Motor Truck Co.
Mack Trucks, Inc.
Marmon-Herrington Co.
Oshkosh Motor Truck, Inc.
Reo Motors, Inc.
Sterling Motors Corp.
Studebaker Corp.
Walter Motor Truck Co.
Ward LaFrance Truck Div.
White Motor Co.

TUBES, INNER
Polson Rubber Co.
United States Rubber Co.
Waber Co.

TUBE DUNKERS
Bishman Mfg. Co.

TUNE-UP OIL
Casite Corp.
Emerol Mfg. Co.
Hollingshead Corp., R. M.
Permatex Co.

UNDERCARRIAGES, TRAILER
Union Metal Mfg. Co.

UNIVERSAL JOINTS
Almetal Universal Joint Co.
Blood-Brothers Machine Co.
New England Auto Products Corp.

UPHOLSTERY MATERIAL
Textileather Corp.

VALVES, ENGINE
Allied Motor Parts Co.

VALVE CAPS
Schrader's Son, Div. of Scovill Mfg. Co., A.
Speaker Corp., J. W.

VALVE CORES
Schrader's Son, Div. of Scoville Mfg. Co. A.
Speaker Corp., J. W.

VALVE GUIDES
Allied Motor Parts Co.

VALVE KEEPER INSERTERS
K-D Mfg. Co.

VALVE KEYS
Allied Motor Parts Co.

VALVE RESEATING TOOLS
Lee Co., K. O.

VALVE SERVICING EQUIPMENT
Hall Mfg. Co.

VALVE SPRINGS
Allied Motor Parts Co.

VALVE SPRING LIFTERS & COMPRESSORS
K-D Mfg. Co.

VOLTAGE REGULATOR TOOLS
Lanagan & Hoke

VULCANIZERS
Dill Mfg. Co.
Inland Rubber Co.
Keel & Co.
Speaker Corp., J. W.

WARNING SIGNALS, GASOLINE TANK FILL
Scully Signal Co.

WARNING SIGNALS, OIL OR AIR PRESSURE
Nason Co.

WARNING SIGNALS, TEMPERATURE
Nason Co.

WASHERS (ASSORTMENTS)
Whitehead Stamping Co.

WASHING UNITS, TRUCK—See CLEANING UNITS, TRUCK

WATER PUMPS
Allied Motor Parts Co.
Clawson & Bals, Inc.
Wohlert Corp.

WATER PUMP PARTS
Allied Motor Parts Co.
Clawson & Bals, Inc.

WHEELS
Budd Co.
Clark Equipment Co.
Dayton Steel Foundry Co.
Gunite Foundries.

WHEEL ALIGNMENT GAGES
Bear Mfg. Co.
Micro-Linor Service Corp.

WHEEL BALANCERS
Bear Mfg. Co.

WHEEL BALANCE WEIGHTS
Loney Co., Harley C.
Mid-Western Auto Parts

WINCHES, TRUCK
Braden Winch Co.
Silent Hoist & Crane Co.
Tulsa Winch Div. of Vickers, Inc.

WINDSHIELD WIPERS
Trico Products Corp.

WRENCHES
Duro Metal Products Co.
Owatonna Tool Co.
Snap-On Tools Corp.
Stevens-Walden, Inc.
Williams & Co., J. H.



THE NEW EXIDE BATTERIES

For extra-duty service at low cost per mile of operation

These new, powerful, ruggedly built Exide Batteries are the latest development of Exide engineering plus the results of world-wide war-time experience on trucks and other automotive equipment of every kind.

The New Exide Batteries are new in every detail—design, construction, performance ability—with many improvements and added features; all of which combine to provide maximum dependability, long-life, ease of maintenance and a low cost per mile of operation. For instance:

A FEW OF MANY FEATURES

- Heavy, over-size plates
- Greater capacity
- Self-cleaning, non-spitting vent plugs
- Double insulation between plates
- "Bull's Eye" electrolyte leveling device
- Larger, heavier inter-cell connectors
- Heavy-duty hard rubber container
- Positive cover seals

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32

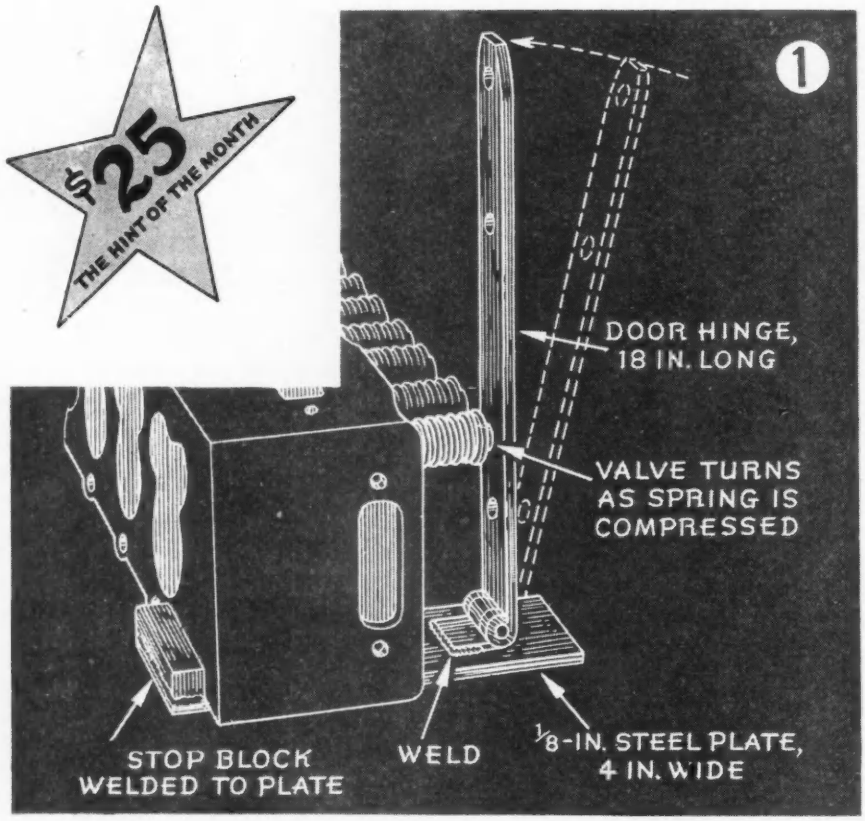
Exide Batteries of Canada, Limited, Toronto

$5 FOR ALL HINTS PUBLISHED EACH MONTH



$25 FOR THE BEST HINT PUBLISHED EACH MONTH

Shop and Salvage Hints



1. Valve Adjustment Jig

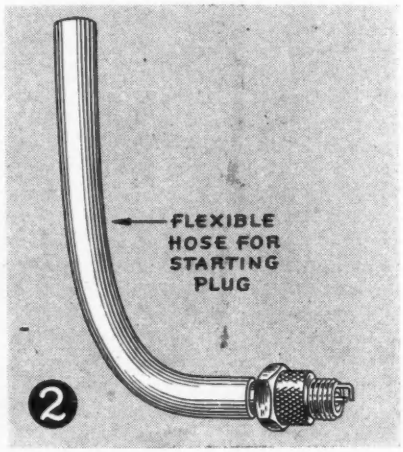
by C. Coraggio, Shop Foreman
Trailer and Truck Repair Co., Secaucus, N. J.

When doing a valve job on Continental overhead valve engines equipped with rotary valves, it is hard to get the proper clearance. If the clearance between the exhaust valve stem and its cap is not correct, the valve will not turn on its seat when opened.

I have made a jig for checking the rotation of this valve while the head is off and find that it saves a lot of time with adjustments. This jig is made from a steel plate 4 in. wide and 1/8 in. thick, of a length to fit the head. A 1 x 4-in. block is welded to the end of the plate as shown, and a regular door hinge is fitted to the other end of the plate so that it will contact the valve stem cap.

The jig is placed on the bench under the head and the hinge is moved into contact with the valve stem cap. Then the valve spring is compressed and released, the valve should turn on its seat. If valve does not turn, grind off end of stem lightly and repeat the operation.

A jig of this type will enable the mechanic to get an accurate adjustment quickly and easily.



2. Spark Plug Installation

Ralph L. Bussler
Williamsport Trans. Co.
Williamsport, Pa.

Here is a tip I find useful for putting spark plugs in engines where the plugs are set in deep sockets and one gets his hands burned while trying to start them.

By slipping a short section of hose over the porcelain of the plug, the plug can be started easily without touching the hot engine. The hose should be long enough and flexible enough to bend easily at a right angle while being turned.

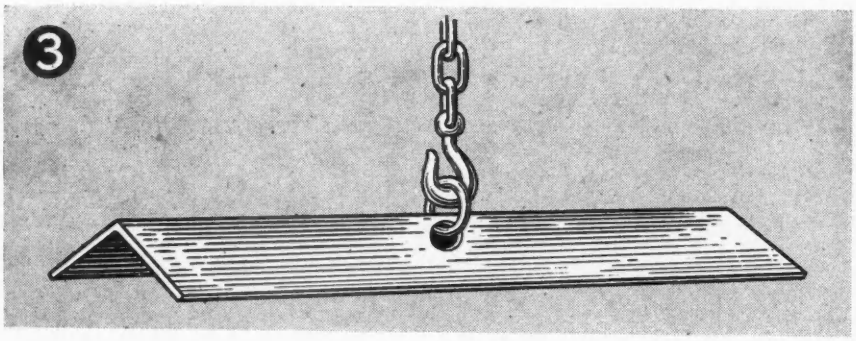
3. Chain Hoist Jig

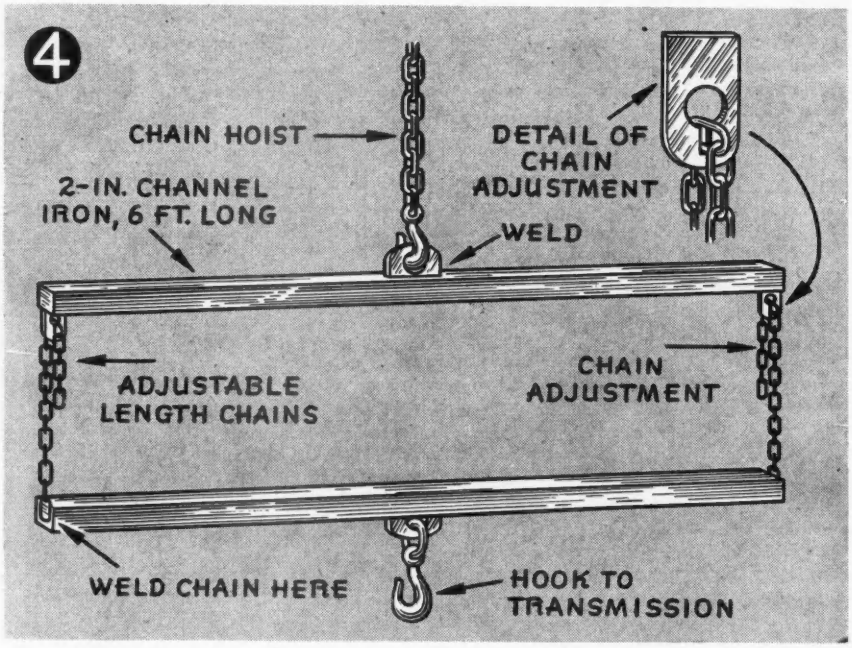
by A. A. Suggs, Shop Foreman
Yellow Transit Co.
Oklahoma City, Okla.

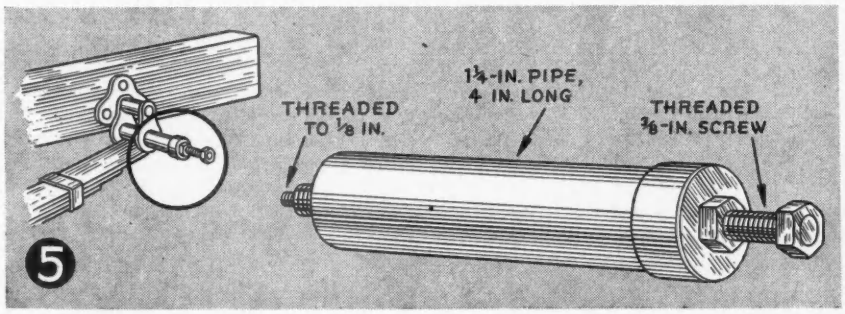
A simple tool for handling V-8 engines can be made from scrap iron in a few minutes. This jig will save time and eliminate the use of chains when lifting the Ford engine.

The tool is made from a piece of 3/16 x 2 x 14-in. angle iron. Holes are bored in the center as illustrated and a 5/16-in. rod is formed into a ring and looped through the holes.

Now is the time for all good mechanics to make themselves some extra cash. All . . . yu gotta . . . do, is sit down and write up one of your shop's favorite short cuts to maintenance—or else some info on a durned good homemade shop tool. It might be a tip on salvaging some of that junk hang-around the back room—and it could be on an improved repair method that your shop has developed. You don't like to write? Well, draw a picture—shoot us a diagram with a few simple words. We'll attempt to figure it out. We will do the work, but we want your idea. For five fins, men, you can't go wrong. Give it a try, and you may hit the jack pot of $25, with five bucks the absolute minimum for an accepted service hint or a short cut to maintenance.







The angle iron is inserted into the valve chamber of the engine, affording a hook for the hoist. It can be slipped forward or backward to balance the engine.

4. Transmission Lift Jig

by H. Bruce
The Beiter Line, Inc.
Elyria, Ohio

We have heavy trucks in our fleet with transmissions that are very hard to handle when overhaul and removal is necessary. I have made a jig that works very nicely in this work and saves using jacks, making the operation much safer.

I cut two bars from either angle iron, square stock or iron pipe into 6-ft. lengths and weld eyes to the center as illustrated. To the ends of one piece I weld lengths of chains and to the ends of the top piece I fit a chain adjusting piece as shown.

To use this jig, put one bar over the top of the cab and the other through the doors of the truck. Hook the chain hoist to the top eye and fasten the transmission to the bottom eye. Adjust the chains to clear the top of the cab and the floor, and lower the transmission with the hoist.

5. Shackle Pin Puller

by Harry Malischeski
Supplee Wills-Jones Milk Co.
Philadelphia, Pa.

When changing a rear spring on a 1½-ton Ford and some other trucks the spare tire and tire carrier must be removed in order to drive out the rear shackle pin. And there is not sufficient room to swing a one-pound hammer. I have made a puller for this job and save 15 to 20 minutes.

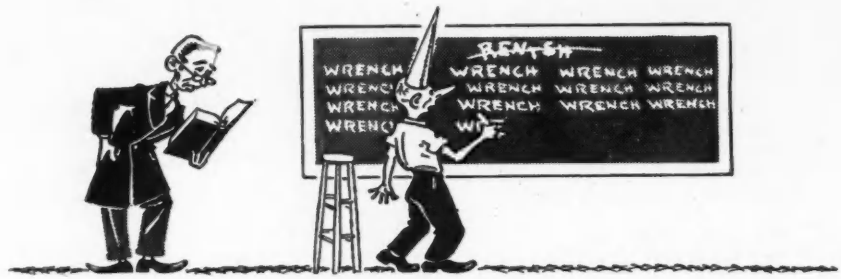
I remove the grease fitting and screw the puller screw into the shackle. The tightest pin will come out easily.

The puller is made from a 1¼-in. pipe 4 in. long, with a regular pipe cap turned onto it. A 7/16-in. hole is drilled through the center of the cap. The center screw is made from a ⅜-in. piece of cold rolled steel 5½-in. long, threaded at the tip to ⅛-in. pipe thread. The remainder of the screw is threaded to ⅜-in., and a nut is turned on above the pipe cap. The head of the screw is a nut drilled and pinned to the shank. This is used with a flex wrench just like a regular puller.

CCJ QUIZ

by ***ROBERT F. BAHL***

Answers on Page 134



Line up, everybody. We have a little quiz on front wheel alignment. Each question is worth 10 points. 60 is fair; 70 good; 80 very good; 90 excellent, and 100 puts you to the front end of the class. Answers are on page 134.

1.

"Camber" on the front wheels should remind you of a man who . . .

a. is bow-legged.
b. is knock-kneed.
c. is pigeon-toed.
d. walks like Charlie Chaplin.

2.

Which of these would give you the best visualization of "caster"?

a. The front axle of a coaster wagon.
b. The steering post of a bicycle.
c. A turkey wishbone.
d. A dog's hind leg.

3.

"Toe-in" means that the front wheels are closer together . . .

a. at the top than at the bottom.
b. at the bottom than at the top.
c. at the front than at the back.
d. at the back than at the front.

4.

You wouldn't have to concern yourself about "toe-out" if your truck never . . .

a. went in reverse.
b. turned a bend.
c. went over 40 miles per hour.
d. went uphill.

5.

The fifth factor affecting front wheel alignment—in addition to camber, caster, toe-in, and toe-out—is . . .

a. gather.
b. toe-under.
c. wheel spindle.
d. kingpin inclination.

6.

The tendency of a truck to turn to one side while driving on a straight road, even when a cute blonde isn't in sight, is called . . .

a. wheel tramp. c. wander.
b. shimmy. d road pull.

7.

A wheel ½-in. out of alignment on a mile trip will drag the tire sideways a distance of . . .

a. 3 feet. c. 27 feet.
b. 10 feet. d. 87 feet.



"I can see it all now . . . Hollywood, Broadway, automobiles, good jobs . . . PHOOIE, what a *lousy capitalistic* country!"

8.

When a truck makes a right turn, which front wheel makes the sharper turn?

a. The right wheel.
b. The left wheel.
c. The same for both wheels.

9.

You can check for front end misalignment on regular machines designed for the purpose, or you can wait until your tires are worn out and then find the trouble. See if you can match up these abnormal tire troubles with their causes . . .

1. Spotty side-to-side wear.	a. Incorrect toe-in.
2. "Feather edges" on tread blocks.	b. Too much camber.
3. Excessive wear on outside half of tread.	c. Not enough camber.
4. Excessive wear on inside half of tread.	d. Incorrect kingpin inclination.

10.

This last one is a "true or false" question. You get two points for each correct choice.

a. Camber is generally measured in inches. True or false?

b. All trucks are designed to have some degree of caster. True or false?

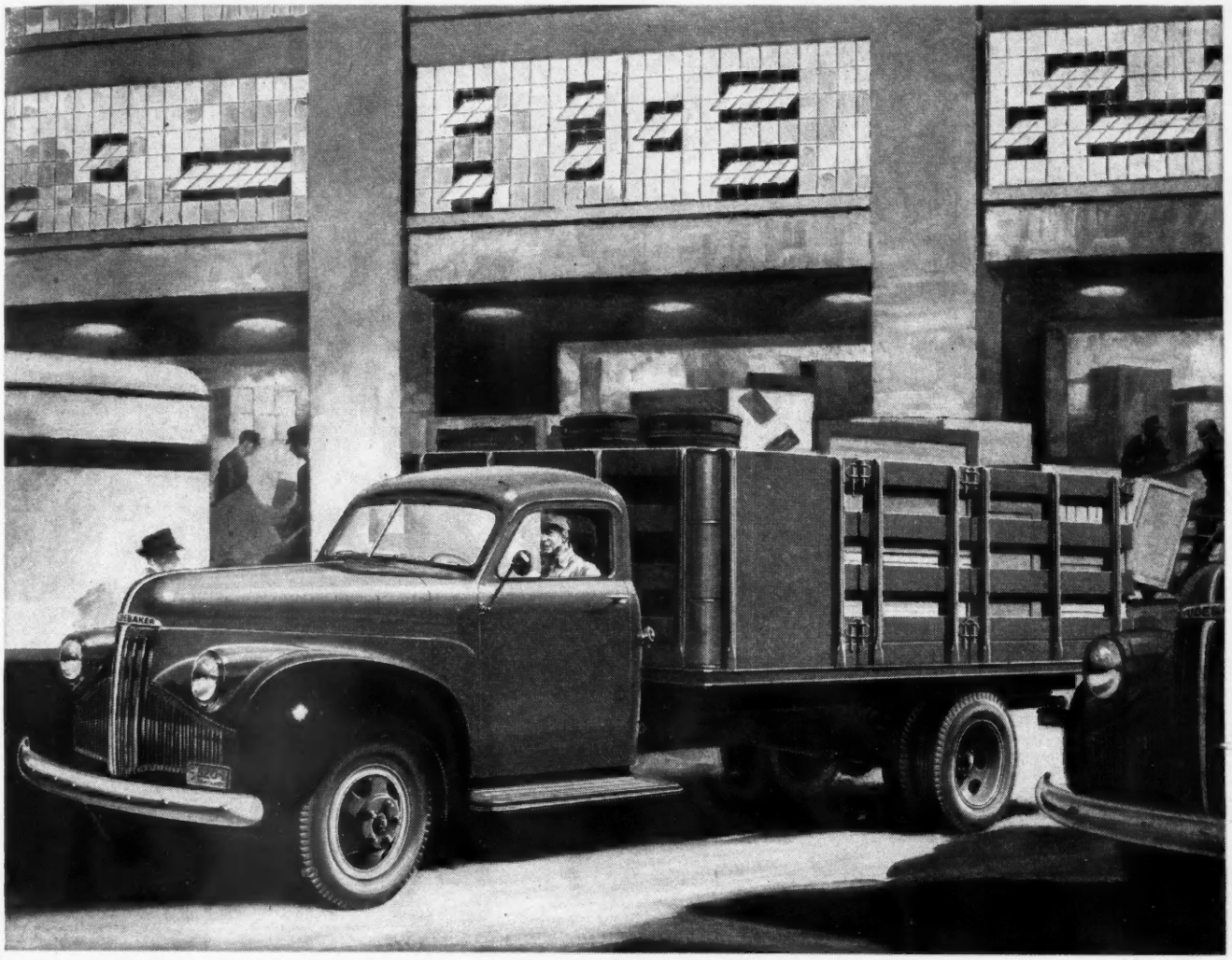
c. Toe-in should seldom exceed ¼ in. True or false?

d. Tire wear from incorrect toe-out is usually more pronounced on the left wheel than on the right wheel. True or false?

e. Toe-in can be varied by adjusting the length of the tie rod. True or false?

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YOU find that a new Studebaker truck wastes no time coming up with clear proof that it's a real money-saver.

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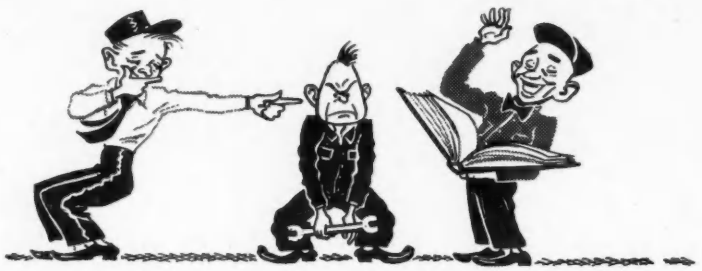
What's more, at no extra cost, you protect your investment with the extra quality and the surviving soundness of Studebaker's painstaking master craftsmanship, much of it the work of unique Studebaker father-and-son teams.

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LAUGH IT OFF



The young man in the neatly-fitting uniform was descending the steps of the Post Exchange. An Army Officer halted him and queried: "What's the eighth general order?"

"I don't know," the young man admitted.

"Have you ever been on guard duty?"

"Nope."

"You don't even know enough to say 'sir.' What outfit are you in?

"Sorry, sir, I'm the Soft Drink Route man."

C C J

"So you have to run home as usual?" scoffed one of the group at the bar as a timid looking man rose to leave.

"What are you, a man or a mouse?"

"A man of course," replied the little fellow with dignity.

"What makes you so sure?" demanded the other.

"Because," he explained, "my wife is afraid of a mouse."

C C J

"It's good of you, Doctor, to have come so far to see my husband."

"Not at all, Madam, not at all. You see, I have a patient next door, and I thought I'd kill two birds with one stone."

C C J

Jim, the Dispatcher, took Catty Cora, the office cut-up, out on a date. Stopping his convertible in a cozy parking spot, Jim turned to Cora and asked, "Would you like to indulge in a bit of heavy necking?"

Cora: "I hope to kiss a pig!"

C C J

Son (after lecture from father): "You say the early bird catches the worm. How about the worm? Wasn't he foolish to get up so early?"

Father (solemnly and quickly): "That worm hadn't been to bed at all. He was on his way home."

C C J

Traffic Cop: "Let me see your driver's license. I bet you don't even have one."

Truck Driver (the Cowboy type): "Oh, yes I have too—got it right here in my billfold."

T. Cop: "That's all right, then. If you've got it, I don't need to look at it. If you didn't have one I'd have to see it."

The trucking commission from London were in the United States studying the methods and procedures of American motor carriers. One member of the delegation, a young nobleman, had captured the fancy of the daughter of a large fleet owner. Observing the budding romance with amusement, the fleet owner, in a mischievous moment, inquired of his daughter, "Hath Sir Gordon yet asked thee for thy hand in wedlock?"

Daughter: "Not yet, Pater, old thing, but the knight is young."

C C J

"I'd like to order a new car."

"Certainly, sir, but—er—may I have your age?"

"I'm 70."

"Well, you understand, sir, that by the time the car is delivered—"

"I understand. I'm placing the order for my grandson and I would like delivery by the time his children are old enough to enjoy riding in a car."

"That's better. How old is your grandson?"

"He was born this morning."

C C J

Dan, the freight checker, says he was shopping in a department store yesterday and was attracted by the doll display. Walking over, he squeezed one doll and it hollered "Mama!" Spurred on to greater opportunities, he squeezed another—and she yelled "Floorwalker!"

C C J

Englishman: "The Scottish people have a good sense of humor. I wonder where they get it?"

Irishman: "It must be a gift."

C C J

Shop Foreman: "You've been with this firm a week, and it seems that you can do nothing correctly. When you applied for this job you said you were a handy man."

"That's right, sir. I live just 'round the corner and its plumb handy."



"Perchance did you have it in gear?"

C C J

GARAGE MANAGER: "WHAT SEEMS TO BE THE TROUBLE, LADY?"

SWEET YOUNG THING: "THEY TELL ME I HAVE A SHORT CIRCUIT. CAN YOU LENGTHEN IT WHILE I WAIT?"

C C J

Mose, the clean-up man in the maintenance department, was on the river bank watching the baptism of his friend in the icy waters. After the pastor had immersed the subject and raised him to the surface, Mose asked his pal: "Is it cold, Sam?"

Sam: "No-o-o-o-o."

Mose: "Den yo' better duck 'im agin, parson; he ain't stop lyin' yet."

C C J

NEW DRIVER: "IN CASE A MEMBER OF THIS LOCAL SHOULD PASS AWAY, ARE THERE ANY DEATH BENEFITS?"

BUSINESS AGENT: "YES, SIR. WHEN YOU DIE, YOU DON'T HAVE TO PAY ANY MORE DUES."

C C J

Giddy Gertie, our clean-up gal, says she calls her boy friend Moth because he likes to fool around her sweater.

C C J

The president of Fleety-Fleet Motor Express was giving a dinner party in celebration of the tenth anniversary of his company. He noticed that one of the feminine entertainers was only nibbling at the refreshments. "What's the matter, honey?" he asked her. "Why don't you eat some of this wonderful cake?"

"I have to watch my figure," the singer explained.

The president smiled. "You eat the cake," he ordered. "I'll watch your figure."

C C J

Blondie: "I'm afraid that new rate clerk friend of mine doesn't intend to propose very soon. He gave me a perfectly huge box of stationery, yesterday."

Brownie: "Is that bad?"

Blondie: "Decidedly. It has my present initials on it."

Resume Work



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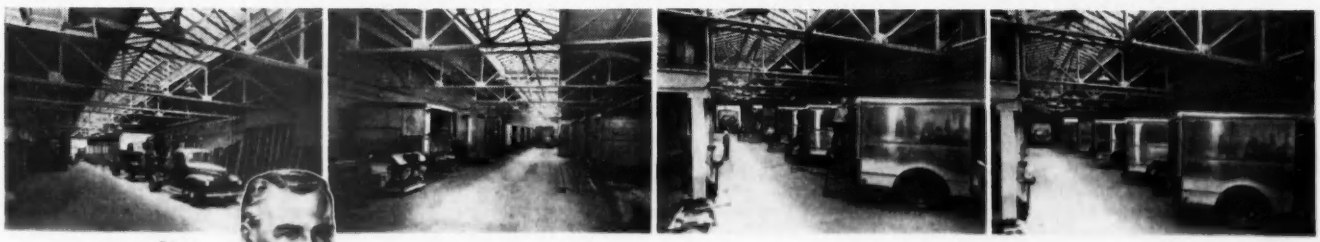
Wherever you do business, there is a neighbor of yours who has a new—unique plan for supplying your truck body requirements. He is an important local manufacturer—he can personally understand your needs and build bodies to meet your specifications. At the same time, he is the only builder who can supply Lindsay Structure Bodies, and give you all the plus advantages of LS mass production.

There are 207 of these men in all parts of the country so that wherever you go there is an "LS Jim" to supply your Lindsay Bodies to the same specifications —or to give you FAST, AUTHORIZED LS SERVICE—on your old bodies.

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U. S. Patents 2017629, 2263510, 2263511
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Fleet Buyers Guide . . . (Continued from Page 109)

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U. S. Asbestos Div. Raybestos-Manhattan, Inc.

RADIATOR RUST PREVENTIVES (COMPOUNDS)
Warner-Patterson Co.

RADIATOR RUST PREVENTIVES (ELECTROLYTIC)
Butler Engineering Co.
Electromatic Engineering Co.

RADIATOR SEALING COMPOUNDS
Bowes "Seal Fast" Corp.

REAR AXLE STUD LOCKING RINGS
Champ-Items, Inc.

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Knopf Instrument Co.
Service Recorder Co.
Wagner Electric Corp.

REFLECTORS
Grote Mfg. Co.
Yankee Metal Products Corp.

REFRIGERATION UNITS, TRUCK
Kold-Hold Mfg. Co.
Sterling Mfg. Co.
U. S. Thermo Control Co.

RELAYS, HORN & LIGHT
P & D Mfg. Co.
Standard Motor Products, Inc.

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Hanley Mfg. Div. American Chain & Mfg. Co.

RUBBER LUBRICANTS
American Grease Stick Co.

SANDERS, HIGHWAY (TRUCK)
Highway Safety Appliances, Inc.

SANDERS, PORTABLE ELECTRIC
Albertson & Co.

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SEATS, TRUCK
Bostrom Mfg. Co.
Monroe Auto Equipment Co.

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Delco Products Div. General Motors Corp.

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Kester Solder Co.

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Clawson & Bals, Inc.

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STEERING GEARS
Gemmer Mfg. Co.
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Niehoff & Co., C. E.
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THERMOSTATS
Dole Valve Co.

TIE RODS
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TIE ROD ENDS
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Gillette Tires, Div. U. S. Rubber Co.
Kelly-Springfield Tire Co.
Miller Rubber Co.
Mohawk Rubber Co.
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TIRE CARRIERS
T. E. D. Corp.

TIRE CHAINS
International Chain & Mfg. Co.

TIRE CAGES
Schrader's Son, Div. of Scovill Mfg. Co., A.

TIRE & TUBE PATCHES
Dill Mfg. Co.
Speaker Corp., J. W.

TIRE PLUGS
Speaker Corp., J. W.
Wedler-Shuford Co.

TIRE RECAPPING MATERIALS
Mohawk Rubber Co.

TIRE TOOLS
Bishman Mfg. Co.
Keel & Co.
Ken Tool Mfg. Co.
Universal Tire Tool Co.

TIRE VALVES
Speaker Corp., J. W.

TOOLS, HAND
Duro Metal Products Co.
Quality Tools Corp.

TOOL STANDS, PORTABLE
Standard Pressed Steel Co.

TOPS, TRUCK
Turk Corp., C. K.

TOWERS, TRUCK
Silent Hoist & Crane Co.

TRACTORS, TRUCK—See TRUCKS & TRACTORS

TRAILERS
American Bantam Car Co.
Available Truck Co.
Brown Industries
Edwards Iron Works, Inc.
Fruehauf Trailer Corp.
Gramm Trailer Corp.
Highway Trailer Co.
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Truck Engineering Corp.

TRANSMISSIONS
Clark Equipment Co.
Fuller Mfg. Co.
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TRUCKS & TRACTORS
Autocar Co.
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Dart Truck Co.
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Federal Motor Truck Co.
Ford Motor Co.
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Kenworth Motor Truck Co.
Mack Trucks, Inc.
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TUBES, INNER
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VALVES, ENGINE
Allied Motor Parts Co.

VALVE CAPS
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Speaker Corp., J. W.

VALVE GUIDES
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VALVE KEEPER INSERTERS
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VALVE KEYS
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VALVE RESEATING TOOLS
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WARNING SIGNALS, GASOLINE TANK FILL
Scully Signal Co.

WARNING SIGNALS, OIL OR AIR PRESSURE
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WARNING SIGNALS, TEMPERATURE
Nason Co.

WASHERS (ASSORTMENTS)
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WATER PUMPS
Allied Motor Parts Co.
Clawson & Bals, Inc.
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WATER PUMP PARTS
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Clark Equipment Co.
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Gunite Foundries.

WHEEL ALIGNMENT GAGES
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Micro-Linor Service Corp.

WHEEL BALANCERS
Bear Mfg. Co.

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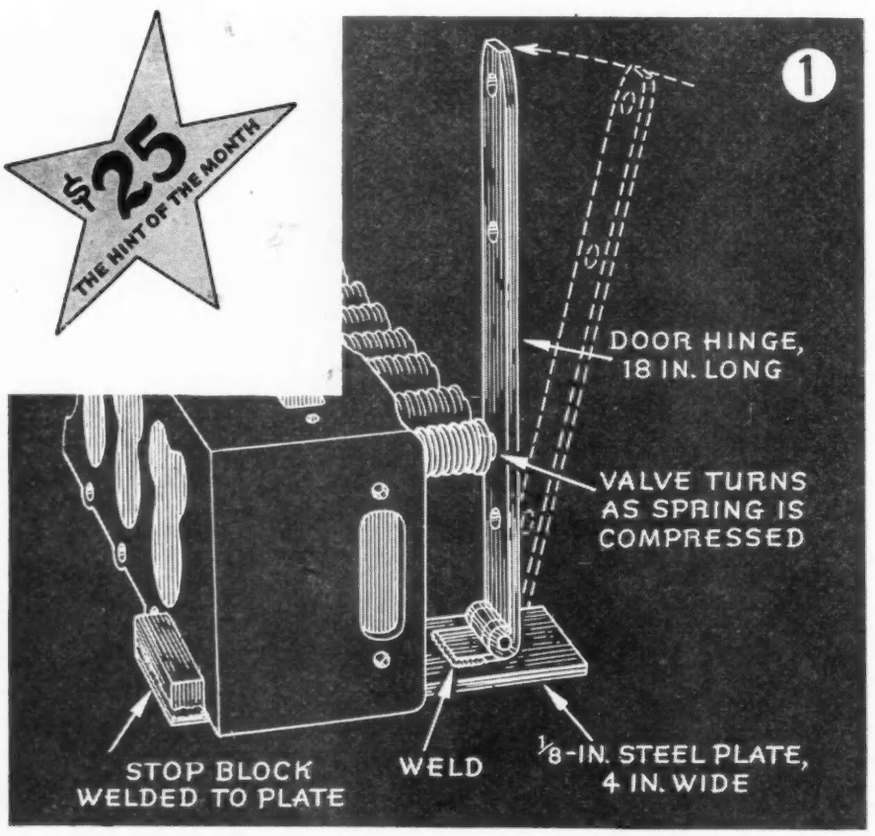
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Shop and Salvage Hints



1. Valve Adjustment Jig

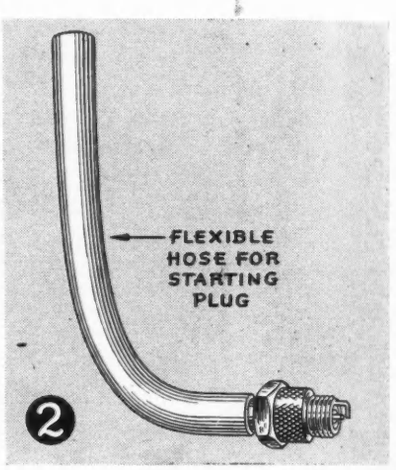
by C. Coraggio, Shop Foreman
Trailer and Truck Repair Co., Secaucus, N. J.

When doing a valve job on Continental overhead valve engines equipped with rotary valves, it is hard to get the proper clearance. If the clearance between the exhaust valve stem and its cap is not correct, the valve will not turn on its seat when opened.

I have made a jig for checking the rotation of this valve while the head is off and find that it saves a lot of time with adjustments. This jig is made from a steel plate 4 in. wide and 1/8 in. thick, of a length to fit the head. A 1 x 4-in. block is welded to the end of the plate as shown, and a regular door hinge is fitted to the other end of the plate so that it will contact the valve stem cap.

The jig is placed on the bench under the head and the hinge is moved into contact with the valve stem cap. Then the valve spring is compressed and released, the valve should turn on its seat. If valve does not turn, grind off end of stem lightly and repeat the operation.

A jig of this type will enable the mechanic to get an accurate adjustment quickly and easily.



2. Spark Plug Installation

Ralph L. Bussler
Williamsport Trans. Co.
Williamsport, Pa.

Here is a tip I find useful for putting spark plugs in engines where the plugs are set in deep sockets and one gets his hands burned while trying to start them.

By slipping a short section of hose over the porcelain of the plug, the plug can be started easily without touching the hot engine. The hose should be long enough and flexible enough to bend easily at a right angle while being turned.

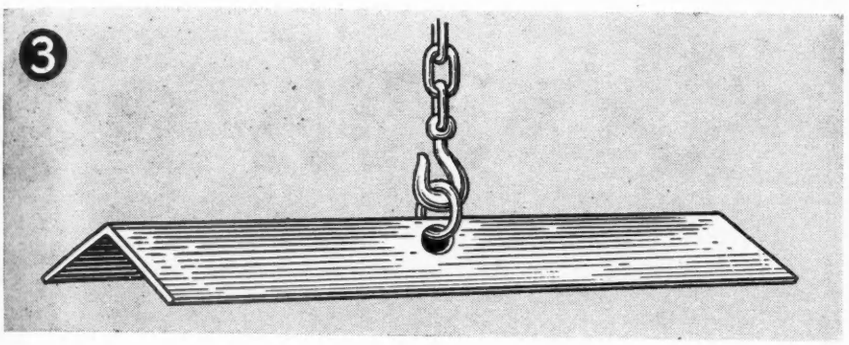
3. Chain Hoist Jig

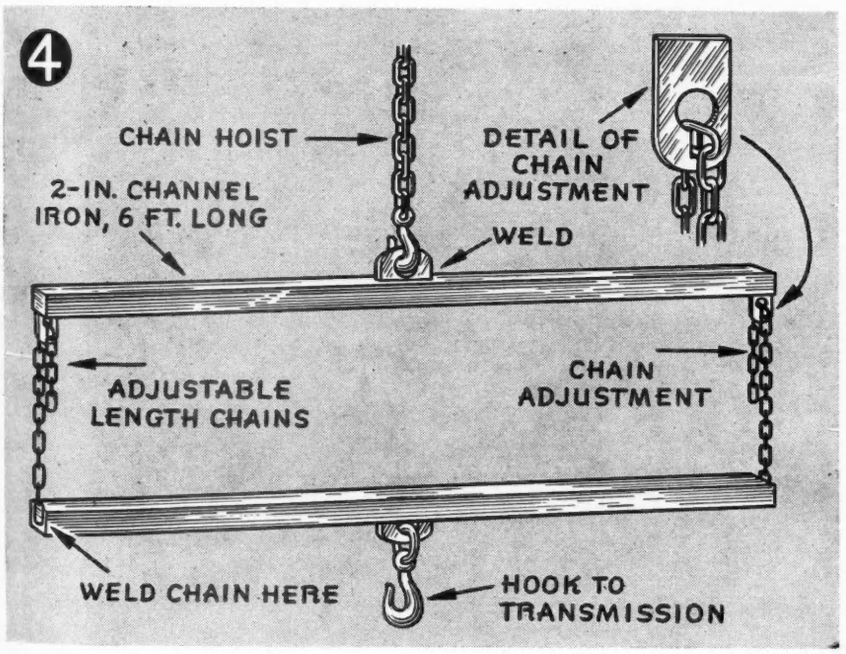
by A. A. Suggs, Shop Foreman
Yellow Transit Co.
Oklahoma City, Okla.

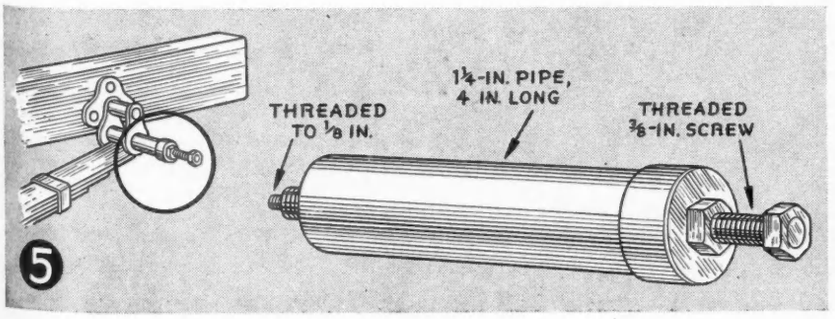
A simple tool for handling V-8 engines can be made from scrap iron in a few minutes. This jig will save time and eliminate the use of chains when lifting the Ford engine.

The tool is made from a piece of 3/16 x 2 x 14-in. angle iron. Holes are bored in the center as illustrated and a 5/16-in. rod is formed into a ring and looped through the holes.

Now is the time for all good mechanics to make themselves some extra cash. All . . . yu gotta . . . do, is sit down and write up one of your shop's favorite short cuts to maintenance—or else some info on a durned good homemade shop tool. It might be a tip on salvaging some of that junk hangaround the back room—and it could be on an improved repair method that your shop has developed. You don't like to write? Well, draw a picture—shoot us a diagram with a few simple words. We'll attempt to figure it out. We will do the work, but we want your idea. For five fins, men, you can't go wrong. Give it a try, and you may hit the jack pot of $25, with five bucks the absolute minimum for an accepted service hint or a short cut to maintenance.







The angle iron is inserted into the valve chamber of the engine, affording a hook for the hoist. It can be slipped forward or backward to balance the engine.

4. Transmission Lift Jig

by H. Bruce
The Beiter Line, Inc.
Elyria, Ohio

We have heavy trucks in our fleet with transmissions that are very hard to handle when overhaul and removal is necessary. I have made a jig that works very nicely in this work and saves using jacks, making the operation much safer.

I cut two bars from either angle iron, square stock or iron pipe into 6-ft. lengths and weld eyes to the center as illustrated. To the ends of one piece I weld lengths of chains and to the ends of the top piece I fit a chain adjusting piece as shown.

To use this jig, put one bar over the top of the cab and the other through the doors of the truck. Hook the chain hoist to the top eye and fasten the transmission to the bottom eye. Adjust the chains to clear the top of the cab and the floor, and lower the transmission with the hoist.

5. Shackle Pin Puller

by Harry Malischeski
Supplee Wills-Jones Milk Co.
Philadelphia, Pa.

When changing a rear spring on a 1½-ton Ford and some other trucks the spare tire and tire carrier must be removed in order to drive out the rear shackle pin. And there is not sufficient room to swing a one-pound hammer. I have made a puller for this job and save 15 to 20 minutes.

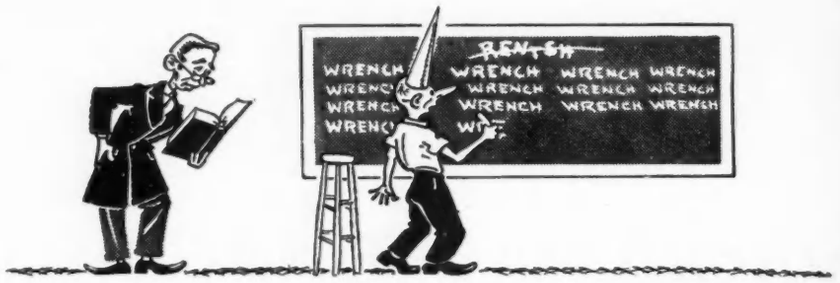
I remove the grease fitting and screw the puller screw into the shackle. The tightest pin will come out easily.

The puller is made from a 1¼-in. pipe 4 in. long, with a regular pipe cap turned onto it. A 7/16-in. hole is drilled through the center of the cap. The center screw is made from a ⅜-in. piece of cold rolled steel 5½-in. long, threaded at the tip to ⅛-in. pipe thread. The remainder of the screw is threaded to ⅜-in., and a nut is turned on above the pipe cap. The head of the screw is a nut drilled and pinned to the shank. This is used with a flex wrench just like a regular puller.

CCJ QUIZ

by ROBERT F. BAHL

Answers on Page 134



Line up, everybody. We have a little quiz on front wheel alignment. Each question is worth 10 points. 60 is fair; 70 good; 80 very good; 90 excellent, and 100 puts you to the front end of the class. Answers are on page 134.

1.

"Camber" on the front wheels should remind you of a man who . . .

a. is bow-legged.
b. is knock-kneed.
c. is pigeon-toed.
d. walks like Charlie Chaplin.

2.

Which of these would give you the best visualization of "caster"?

a. The front axle of a coaster wagon.
b. The steering post of a bicycle.
c. A turkey wishbone.
d. A dog's hind leg.

3.

"Toe-in" means that the front wheels are closer together . . .

a. at the top than at the bottom.
b. at the bottom than at the top.
c. at the front than at the back.
d. at the back than at the front.

4.

You wouldn't have to concern yourself about "toe-out" if your truck never . . .

a. went in reverse.
b. turned a bend.
c. went over 40 miles per hour.
d. went uphill.

5.

The fifth factor affecting front wheel alignment—in addition to camber, caster, toe-in, and toe-out—is . . .

a. gather.
b. toe-under.
c. wheel spindle.
d. kingpin inclination.

6.

The tendency of a truck to turn to one side while driving on a straight road, even when a cute blonde isn't in sight, is called . . .

a. wheel tramp.
b. shimmy.
c. wander.
d road pull.

7.

A wheel ½-in. out of alignment on a mile trip will drag the tire sideways a distance of . . .

a. 3 feet.
b. 10 feet.
c. 27 feet.
d. 87 feet.



"I can see it all now . . . Hollywood, Broadway, automobiles, good jobs . . . PHOOIE, what a *lousy capitalistic* country!"

8.

When a truck makes a right turn, which front wheel makes the sharper turn?

a. The right wheel.
b. The left wheel.
c. The same for both wheels.

9.

You can check for front end misalignment on regular machines designed for the purpose, or you can wait until your tires are worn out and then find the trouble. See if you can match up these abnormal tire troubles with their causes . . .

1. Spotty side-to-side wear.	a. Incorrect toe-in.
2. "Feather edges" on tread blocks.	b. Too much camber.
3. Excessive wear on outside half of tread.	c. Not enough camber.
4. Excessive wear on inside half of tread.	d. Incorrect kingpin inclination.

10.

This last one is a "true or false" question. You get two points for each correct choice.

a. Camber is generally measured in inches. True or false?

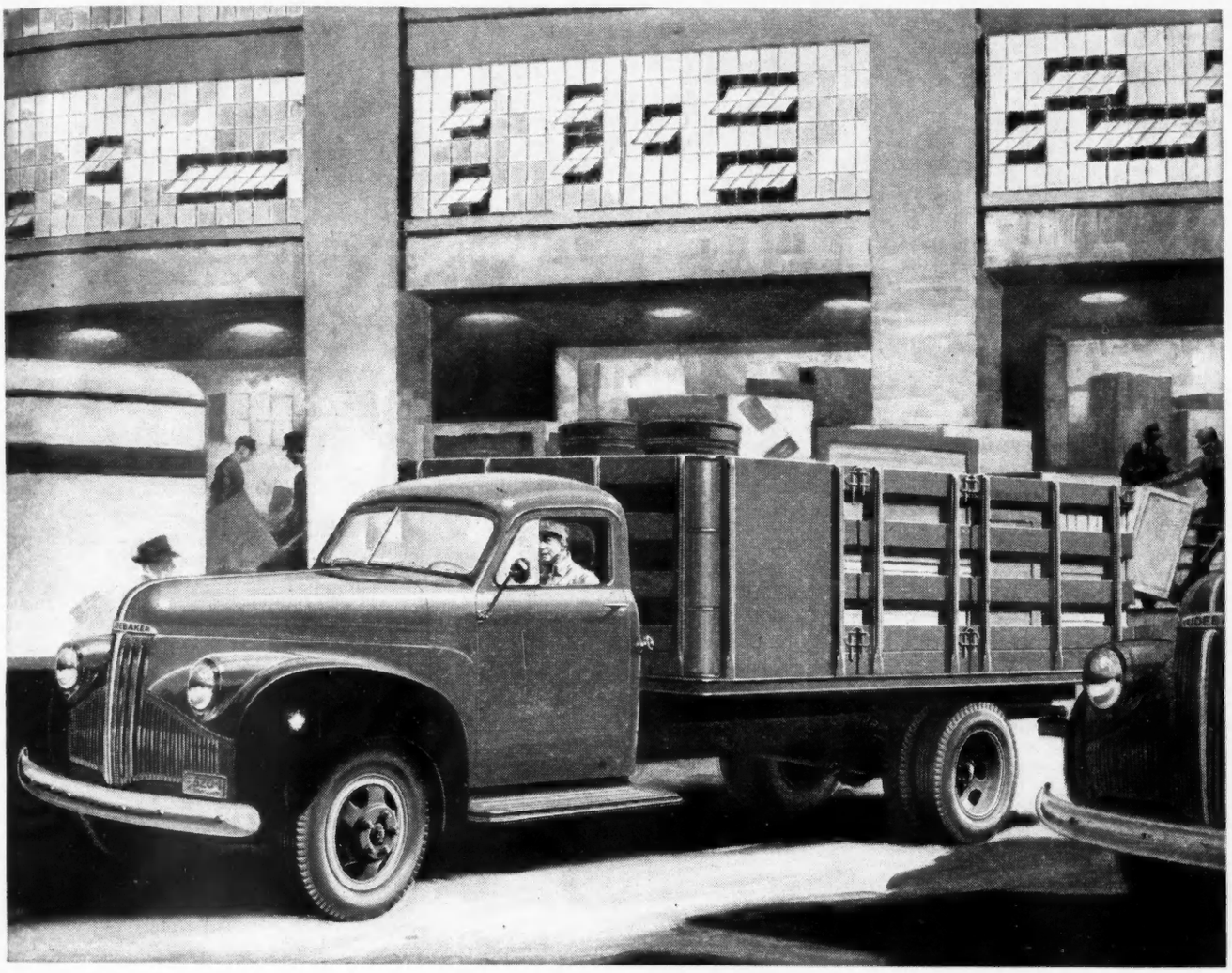
b. All trucks are designed to have some degree of caster. True or false?

c. Toe-in should seldom exceed ¼ in. True or false?

d. Tire wear from incorrect toe-out is usually more pronounced on the left wheel than on the right wheel. True or false?

e. Toe-in can be varied by adjusting the length of the tie rod. True or false?

★ **SCORE CARD** ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10



Studebaker trucks help you level off your rising transport costs

YOU find that a new Studebaker truck wastes no time coming up with clear proof that it's a real money-saver.

Right from the start, it makes every filling of gasoline produce exceptional mileage. That's immediately evident when you look at the dash gauges, after a new Studebaker's first day of work on your routes.

You get far more than gas-saving

Week after week, in the hardest kind of service, a new Studebaker truck keeps rolling along free from the need for serious mechanical attention.

It stays on the job without frequent lay-offs for costly adjustments and repairs, because Studebaker took the time to pre-test it thoroughly before it was sold to you.

Verified quality—full equipment

Every Studebaker truck model is an honor graduate of the famed 800-acre proving ground and technical laboratories through which Studebaker engineers and Army Ordnance specialists put much of the mechanized equipment of World War II.

And that's not all. The Studebaker truck that's delivered to you comes complete with everything you require for efficient, economical, post-war transport service.

That holds true, not only for the heavy-duty-model Studebaker that's pictured above, but also for the Studebaker one-ton and the half-ton Coupe Express pick-up models.

Studebaker's brilliant Hy-Mileage engine powers the heavy-duty model. Studebaker's sturdy Econo-miser engine of wartime Weasel fame keeps operating costs low in the one-ton and half-ton models.

What's more, at no extra cost, you protect your investment with the extra quality and the surviving soundness of Studebaker's painstaking master craftsmanship, much of it the work of unique Studebaker father-and-son teams.

STUDEBAKER

Builder of trucks you can trust

The Studebaker Corporation, South Bend 27, Indiana, U. S. A.

LAUGH IT OFF



The young man in the neatly-fitting uniform was descending the steps of the Post Exchange. An Army Officer halted him and queried: "What's the eighth general order?"

"I don't know," the young man admitted.

"Have you ever been on guard duty?"

"Nope."

"You don't even know enough to say 'sir.' What outfit are you in?

"Sorry, sir, I'm the Soft Drink Route man."

C C J

"So you have to run home as usual?" scoffed one of the group at the bar as a timid looking man rose to leave.

"What are you, a man or a mouse?"

"A man of course," replied the little fellow with dignity.

"What makes you so sure?" demanded the other.

"Because," he explained, "my wife is afraid of a mouse."

C C J

"It's good of you, Doctor, to have come so far to see my husband."

"Not at all, Madam, not at all. You see, I have a patient next door, and I thought I'd kill two birds with one stone."

C C J

Jim, the Dispatcher, took Catty Cora, the office cut-up, out on a date. Stopping his convertible in a cozy parking spot, Jim turned to Cora and asked, "Would you like to indulge in a bit of heavy necking?"

Cora: "I hope to kiss a pig!"

C C J

Son (after lecture from father): "You say the early bird catches the worm. How about the worm? Wasn't he foolish to get up so early?"

Father (solemnly and quickly): "That worm hadn't been to bed at all. He was on his way home."

C C J

Traffic Cop: "Let me see your driver's license. I bet you don't even have one."

Truck Driver (the Cowboy type): "Oh, yes I have too—got it right here in my billfold."

T. Cop: "That's all right, then. If you've got it, I don't need to look at it. If you didn't have one I'd have to see it."

The trucking commission from London were in the United States studying the methods and procedures of American motor carriers. One member of the delegation, a young nobleman, had captured the fancy of the daughter of a large fleet owner. Observing the budding romance with amusement, the fleet owner, in a mischievous moment, inquired of his daughter, "Hath Sir Gordon yet asked thee for thy hand in wedlock?"

Daughter: "Not yet, Pater, old thing, but the knight is young."

C C J

"I'd like to order a new car."

"Certainly, sir, but—er—may I have your age?"

"I'm 70."

"Well, you understand, sir, that by the time the car is delivered—"

"I understand. I'm placing the order for my grandson and I would like delivery by the time his children are old enough to enjoy riding in a car."

"That's better. How old is your grandson?"

"He was born this morning."

C C J

Dan, the freight checker, says he was shopping in a department store yesterday and was attracted by the doll display. Walking over, he squeezed one doll and it hollered "Mama!" Spurred on to greater opportunities, he squeezed another—and she yelled "Floorwalker!"

C C J

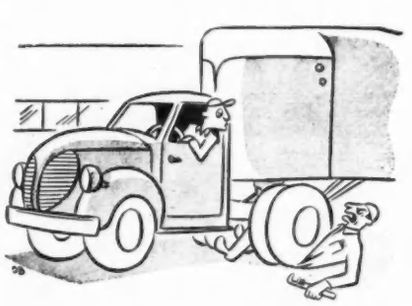
Englishman: "The Scottish people have a good sense of humor. I wonder where they get it?"

Irishman: "It must be a gift."

C C J

Shop Foreman: "You've been with this firm a week, and it seems that you can do nothing correctly. When you applied for this job you said you were a handy man."

"That's right, sir. I live just 'round the corner and its plumb handy."



"Perchance did you have it in gear?"

C C J

GARAGE MANAGER: "WHAT SEEMS TO BE THE TROUBLE, LADY?"

SWEET YOUNG THING: "THEY TELL ME I HAVE A SHORT CIRCUIT. CAN YOU LENGTHEN IT WHILE I WAIT?"

C C J

Mose, the clean-up man in the maintenance department, was on the river bank watching the baptism of his friend in the icy waters. After the pastor had immersed the subject and raised him to the surface, Mose asked his pal: "Is it cold, Sam?"

Sam: "No-o-o-o-o."

Mose: "Den yo' better duck 'im agin, parson; he ain't stop lyin' yet."

C C J

NEW DRIVER: "IN CASE A MEMBER OF THIS LOCAL SHOULD PASS AWAY, ARE THERE ANY DEATH BENEFITS?"

BUSINESS AGENT: "YES, SIR. WHEN YOU DIE, YOU DON'T HAVE TO PAY ANY MORE DUES."

C C J

Giddy Gertie, our clean-up gal, says she calls her boy friend Moth because he likes to fool around her sweater.

C C J

The president of Fleety-Fleet Motor Express was giving a dinner party in celebration of the tenth anniversary of his company. He noticed that one of the feminine entertainers was only nibbling at the refreshments. "What's the matter, honey?" he asked her. "Why don't you eat some of this wonderful cake?"

"I have to watch my figure," the singer explained.

The president smiled. "You eat the cake," he ordered. "I'll watch your figure."

C C J

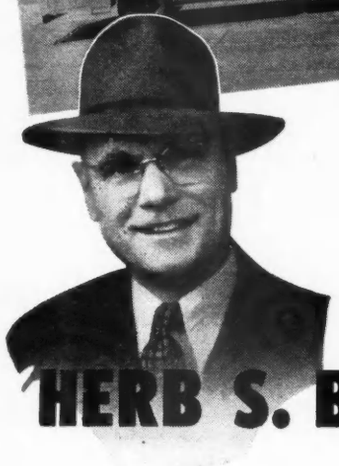
Blondie: "I'm afraid that new rate clerk friend of mine doesn't intend to propose very soon. He gave me a perfectly huge box of stationery, yesterday."

Brownie: "Is that bad?"

Blondie: "Decidedly. It has my present initials on it."

Resume Work





—and in Cleveland, Ohio—

your LS Jim* is

HERB S. BROWN of Carnegie Body Co.

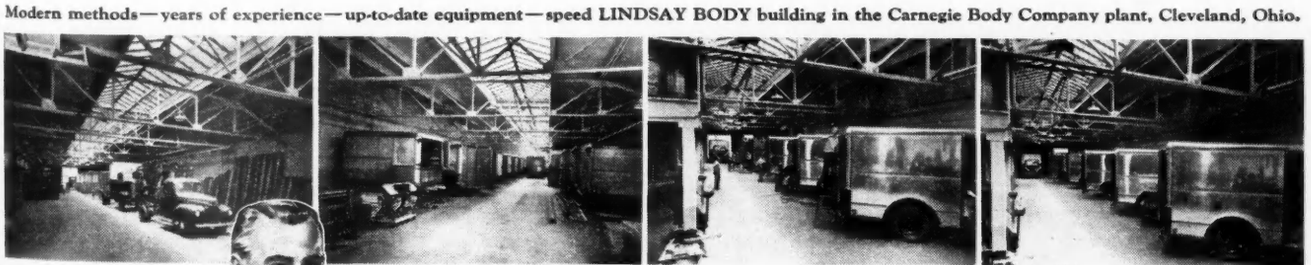
Wherever you do business, there is a neighbor of yours who has a new—unique plan for supplying your truck body requirements. He is an important local manufacturer—he can personally understand your needs and build bodies to meet your specifications. At the same time, he is the only builder who can supply Lindsay Structure Bodies, and give you all the plus advantages of LS mass production.

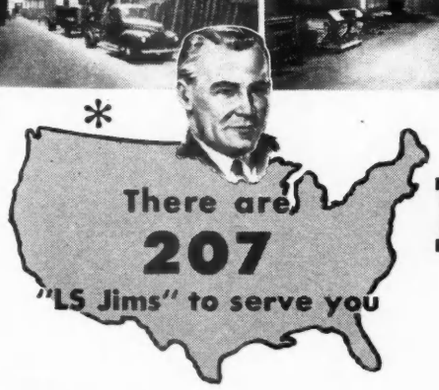
There are 207 of these men in all parts of the country so that wherever you go there is an "LS Jim" to supply your Lindsay Bodies to the same specifications —or to give you FAST, AUTHORIZED LS SERVICE—on your old bodies.

In Cleveland, a typical "LS Jim" is Herb S. Brown, of the Carnegie Body Co. He has been building bodies for years for the leading fleets in the area, and a modern plant equipped for efficient line production backs his efforts. He has the "know-how" and the means to give you fast, understanding service on all your truck body requirements.

We urge you to call Herb Brown, or any of the other 206 "LS Jims"—today—and get acquainted with LS Service. **Write for information. The Lindsay Corporation, 1724 25th Avenue, Melrose Park, Illinois. Sales offices: Chicago, New York, Atlanta, San Francisco, Montreal.**

Modern methods—years of experience—up-to-date equipment—speed LINDSAY BODY building in the Carnegie Body Company plant, Cleveland, Ohio.





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DISTRIBUTORS AND BUILDERS IN ALL PARTS OF THE COUNTRY





At left are shown two bodies made of Type B White-Parish steel sections. The upper body shows custom construction features, and demonstrates design and construction flexibility. The skirted body has wide sliding doors on both sides and hinged doors in the rear. Strap and recessed steps and side and rear skirt compartments for tools and equipment are additional features

White-Parish Bodies Feature Flexibility

Prefabricated Type B steel body sections can be assembled to produce a wide range of body types and sizes in 2-in. increments

OVER the past several years, truck users have voiced a definite need for standardized, prefabricated all-steel bodies of a flexible design which could be obtained in all parts of the country with a minimum of delay. The need encompasses a complete program of materials and fabrication methods, permitting fast and efficient construction by local body builders with a minimum of space, tools and equipment.

To meet such a need, The White Motor Co., Cleveland, Ohio, obtained, about a year ago, the exclusive distribution of Parish Type B prefabricated commercial truck body sections. This type of body was a development of the Parish Pressed Steel Co., based on a wealth of experience in prefabricating heat-treated steel and years of field experience in many of the leading body shops with the Parish A-Line of body sections. The B-Line is a more modern design and lends itself to much greater flexibility in meeting exacting customer specifications.

The White Motor Co. established an experimental body shop in the Philadelphia branch plant to determine the most efficient and economical production methods that could be developed in the fabrication of Parish Type B section bodies.

This plant has been operating for approximately a year, and through this experimental work, The White Motor Co. has developed a body builder's manual giving all the production methods and techniques that have been developed. This manual includes drawings of every part in the bill of material, showing dimensions and application in sub-assemblies. The manual also includes complete drawings of the few simple jigs and fixtures used for the fabrication of these bodies. This material is now available for body builders everywhere to enable them to make use of this advanced design of all-metal body and take advantage of the production methods that have been worked out.

Mass Production Methods

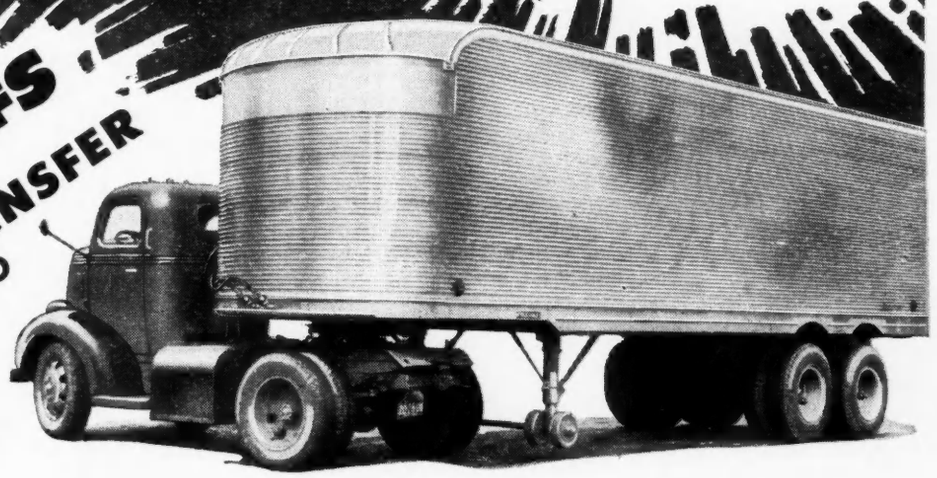
THE basic design principle of the entire line of Type B Sections is that of pre-punched, coordinated as-

(TURN TO PAGE 256, PLEASE)

400 Stainless Steel FRUEHAUFS FOR RISS & COMPANY KANSAS CITY

200 Stainless Steel FRUEHAUFS FOR DECATUR CARTAGE CO. CHICAGO

110 Stainless Steel FRUEHAUFS FOR MIDWEST TRANSFER CHICAGO



• ONLY FRUEHAUF BUILDS STAINLESS-STEEL TRAILERS •

HERE ARE RECORD LOW MAINTENANCE COSTS!

Three operators report on the body maintenance cost of their Fruehauf Stainless Steel Trailers for 1946, after six years of rugged use. Norwalk Truck Line figures, based on a two hundred and fifty work-day year, reveal a cost of 22-4/10c per day—Western Express . . . 21-2/10c per day and W. L. Mead . . . 10-4/10c per day. (Floors and wrecks excluded.)



Leading operators who know the value of Stainless Steel Trailers are buying in big quantities. Performance records—written on the road—confirm the claimed superiority of Stainless Steel over conventional type construction.

Weight-saving strength—new durability—new beauty—new maintenance savings all add up to a better investment all ways. Single-axle models with exclusive Fruehauf "Multi-Rate" springs and the revolutionary "Gravity Suspension" which doubles tire life on Tandem-axle models, are additional money-saving features.

Call the nearest Fruehauf man. Get the full "Stainless Steel" story before you consider the purchase of any new equipment.

World's Largest Builders of Truck-Trailers

FRUEHAUF TRAILER CO.

DETROIT 32

10 Factories—65 Factory Service Branches

Immediate Delivery ON MANY MODELS!

FRUEHAUF TRAILERS — FRUEHAUF NATION-WIDE SERVICE — "ENGINEERED TRANSPORTATION"



DETROIT DISPATCH

IHC Sets Off Price Fuse . . . K-F May Be Next . . . Truck Output Tripled . . . Double-Saddle Furore . . . Indiana Bottleneck Remains . . . Bonded Linings Look Good . . . Light Car Deferred

IHC Sets Off Price Fuse

Truck buyers got their first real break on prices last month when International Harvester Co. announced reductions ranging from $50 on light models to $300 on the heaviest units. It was the first reversal of the upward trend in truck prices in several years but it still remains to be seen whether other truck builders will follow suit. On the basis of reaction in Detroit generally, it looks as though truck manufacturers are not going to fall over their feet rushing into print with a price reduction announcement.

A survey of truck sales managers found all of them pretty calm about the whole business. They generally agree that we are moving pretty rapidly toward a competitive truck market and the time is not far off when buyers will be giving price tags a long cold look. At present, though, the idea is to concentrate on getting production problems licked so that when the time comes they can perform an operation on prices without too much loss of blood. One thing is certain, however, and that is that the International move will spike effectively any ideas that any competitor may have had for increased prices. There is no serious indication that any were figuring on that, although one sales manager hinted that his biggest worry was keeping prices where they are, especially if a wage boost is granted.

K-F May Be Next

Rumors are flying, too, about a forthcoming price cut by Kaiser-Frazer Corp. on its Frazer and Kaiser Special models. Reports that K-F is running into stiff buyer resistance appear to be well founded. The Frazer delivers in Detroit at about $2340, which puts in into direct competition with one Cadillac model. The Kaiser is about $200 cheaper. The picture is further complicated by the introduction of a new luxury model, the Frazer Manhattan, mechanically unchanged but with more luxurious appointments and a wide range of color combinations. The new model lists at $2550, which means a delivered price of around $2750 at least. Some observers think it may mean a price cut on the Kaiser Special and Frazer, leaving the Manhattan in the luxury price class.

by LEN WESTRATE
CCJ Detroit News Editor

Double-Saddle Furore

Operators of truck driveaway services are irate over the action of I.C.C. in disapproving double-saddle mounting, by which one driver can deliver three new trucks. They point out that the commission completely ignored facts in the case, since at a two-day hearing in Detroit last Fall the examiner approved the mounting after comprehensive testimony from operators, manufacturers, and disinterested engineers. It was proved conclusively at the hearing that results of experience and special tests with the mounting showed it to be an eminently safe and economical operation. Particularly distasteful is the opinion from I.C.C. that it is "unwilling to approve new methods of operations, the safety of which appears doubtful, solely on the opinions of motor carriers or other parties in interest that such new methods would be as safe as some existing methods." Operators are asking whose word the commission can accept on anything if the testimony of actual operators and qualified engineers is not sufficient. At any rate, the result will be denial of the opportunity to lower delivery cost of new trucks, with the buyer paying the bill. It is uncertain what course the petitioning operators will take next, although there is a possibility that they may ask for a review by Division 5 of I.C.C.

Indiana Bottleneck Remains

The Indiana Legislature has adjourned after again failing to pass corrective legislation revising upward the length and weight restrictions in force in that state. At present, Indiana is a serious bottleneck in that respect, since it lies athwart the route to a large part of the Mid-West, South and West. A determined fight was made by the trucking interests, but the bill got snarled in a web of politics and died the last day of the session.

Cal. May Repeal Caravan Act

The California legislature currently is considering a measure to repeal the Caravan Act, now in effect there, which levies a fee of $15 on each vehicle driven into the state for sale. The net effect is that the truck buyer is required to pay the $15 additional charge if the vehicle is driven into the state. If one is saddle mounted, it still is considered driven in and is taxed accordingly. It is reported that strong industrial interests are backing repeal.

Truck Output Tripled

Truck production is pushing along at a record clip. The total of about 114,000 trucks in February set a new all-time record and the final figures for March are expected to be even higher. If volume on the present level can be maintained, it will hasten the time when the buyers' market again will appear. A look at comparative figures for the first 2½ months of 1946 and the same period in 1947 shows how much production has improved. From Jan. 1 to March 15, 1946, a total of 96,000 units were built. During the same period this year, the industry built nearly 272,000 units, only a little short of three times as many.

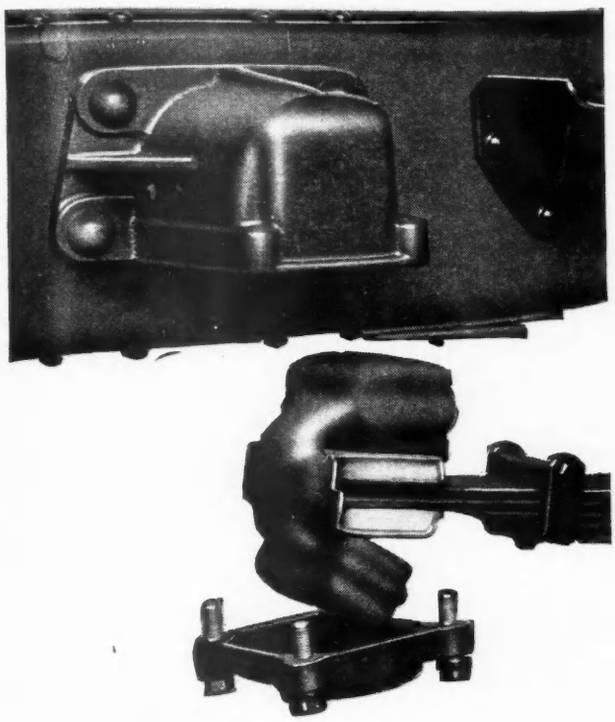
Bonded Lining Looks Good

A development that appears to be coming along fast is bonded brake linings. With this method, linings are bonded to the shoe with some type of thermosetting resin applied with heat and pressure. The advantages are obvious, such as greater braking surface, less chance for scoring drums with projecting rivet heads, and considerably longer wear because more of the lining can be utilized without danger of pulling loose or scoring. Dodge Truck has been using the linings for about a year now, with good results reported. At present, use of bonded linings by Dodge appears to be limited to trucks of 1-ton capacity or less because heavier models build up too much heat.

All passenger car manufacturers are said to be experimenting with the bonded type of lining, and one or two are reported to be thinking seriously of using it on their 1948 models. However, the general opinion is that there still remains a good deal of work to be done on the development before it is perfected. One thing that would result from its general use would be an upheaval in the brake service business. Special equipment is required for a relining job,

(TURN TO PAGE 122, PLEASE)

No other truck has this...



It's a rubber Shock Insulator...developed by Mack engineers more than 20 years ago. It was--and still is--the best means of retaining spring ends.

Shock Insulators do away with binding metal surfaces...there is no metallic contact between springs and chassis. They absorb vibrations. The need for lubrication and adjustment at spring ends is eliminated. Squeaks, rattles, and fast wear of parts are unheard of. Shock Insulators provide smooth performance under heavy loads. They lengthen working life indefinitely.

But how about wear? Shock Insulators have been known to last over ten years. Security? It's impossible for the spring to pull out of its housing. Twisting? The spring can never twist. Removal? It's simple and quick. Shock Insulators aren't complicated.

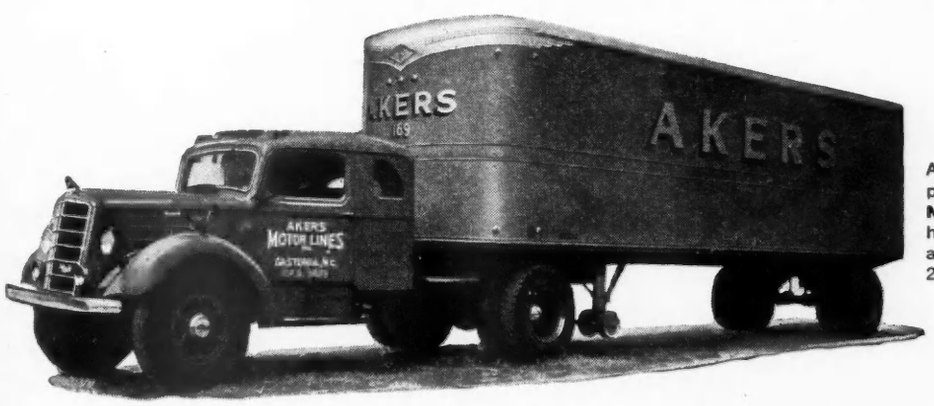
Only Mack employs rubber Shock Insulators as spring-end connectors. That's another good reason why you get more work out of a Mack. More work goes into it.

Mack

since 1900, America's hardest working truck

Mack Trucks, Inc., Empire State Building, New York 1, New York. Factories at Allentown, Pa.; Plainfield, N. J.; New Brunswick, N. J.; Long Island City, N. Y. Factory branches and dealers in all principal cities for service and parts. In Canada, Mack Trucks of Canada Ltd.

Trucks for every purpose



A 100 PER CENT MACK FLEET is the plan of **Akers Motor Lines, Inc., Gastonia, North Carolina.** This firm runs 64 Macks, has 28 on order to complete fleet standardization. Last year's mileage equalled 260 trips around the world.

Detroit Dispatch

(CONTINUED FROM PAGE 120)

both for removing the old lining and cementing on the new. At present, Dodge is retaining the rivet holes in the shoes with bonded linings, so that conventional riveted linings may be used for replacement. Bonded lining shoes shipped from the factory on an exchange basis has been mentioned as a solution to the replacement problem, but this is said to involve freight and handling which might not prove economical. At any rate, it is a development that will bear watching.

Chevrolet Pushing Flint Plant

Latest information on that new Chevrolet assembly plant in Flint is that start of production will come in late May or early June. Completion of the project has been successively delayed because of shortages of materials and equipment. The chief bottleneck now is a shortage of electrical equipment, mostly welders. When completed, the new unit will have a capacity of 60 cars and 20 trucks an hour.

A Fling for Light Bodies

The merits of the light metal truck body have been bandied about a good deal in recent years, and about the only thing definite is that they probably are all right for certain operations. A large Detroit operator now has decided to draw on his 25 years' experience in the trucking industry and build a few magnesium bodies for his own operations. If they prove economically practical, he intends to go into the body building business. The first unit is being completed now in cooperation with the local office of Revere Copper and Brass. A principal drawback to fabrication of light metals has been the difficulty with welding. The operator states that the magnesium members now can be welded with a new process using an electric welder and helium gas. He says further that he will be able to build an 8 x 12 ft. van body of the light metal to sell for around $1200 if and when he goes on a mass production basis. It will be several months, however, before the project is far enough along to tell whether or not it will prove practicable.

Timken Acquires Dual Front

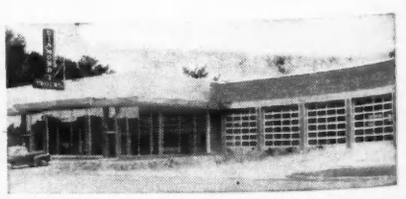
It is reported that patents held by Differential Wheel Corp. for a steering dual front wheel assembly for trucks and buses have been transferred to Timken Detroit Axle Co. There is no indication yet, however, of what Timken intends to do in the way of development or manufacture of the unit. A chief advantage of the steering dual unit is that a greater proportion of the load weight can be shifted forward, increasing carrying capacity.

Light Car Deferred

The Chevrolet light car project has been deferred for another two months. The company late in February sent out a stop order on machinery and tools, setting delivery dates back 60 days. It is thought in Detroit that the move was a wise one, since it will give time to do the right kind of planning and designing, and will cut down on the amount of costly revision and redesign that always result from a rush job. Die layout work is going on steadily and the organization still is intact. It is reported that about the middle of May, GM will dust off its plans again for another look to see if the time is right for a go-ahead on the light car project.

TOOL CATALOG AVAILABLE

ELECTRICAL TOOL CATALOG, listing equipment is available from the United States Electrical Tool Co., 1050 Findlay St., Cincinnati 14, Ohio.



Radiant heating imbedded in the concrete flooring is a feature of the new Diamond T agency at Salt Lake City. One of the largest buildings of its type in the west it has a floor area of 17,347 sq. ft.

Triple-Action* Wash!

for

TRUCKS • TRAILERS • R.R. COACHES
TROLLEYS • BUSSES • AUTOS • BOATS



Saves time—cuts labor cost

*** SCRUBS . . .**
SOAKS . . .
RINSES . . .
IN ONE MOTION!

FOUNTAIN BRUSHES



- **Cleans surfaces and crevices thoroughly**
- **Standard ¾ hose connection**
- **Water control valve-push type**
- **Brush replaceable at low cost**
- **Quality brushes in horsehair, nylon or bristle**

Write today for prices and dealer nearest you.

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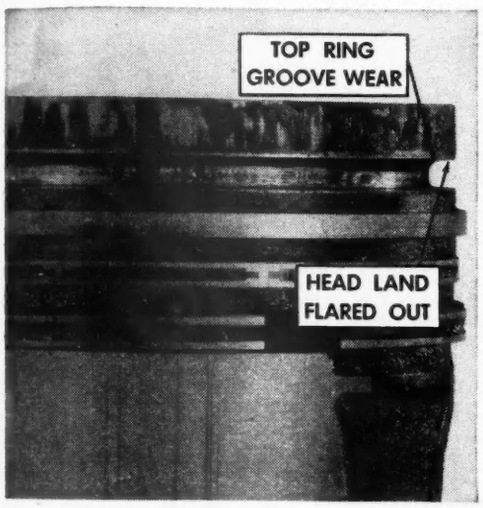
2000 Brooklyn Ave. Detroit 26, Mich.

Brush Manufacturers Since 1855

The only dependable, economical answer to top ring groove wear...

SEALED POWER GI-60

MAKES OLD PISTONS NEW — KEEPS NEW PISTONS YOUNG



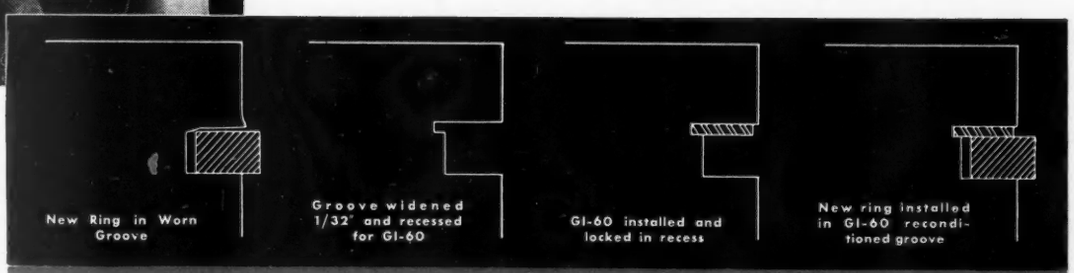
ALL good mechanics know that worn top ring grooves will put two strikes on the best piston rings ever made. A new ring installed in a worn top groove permits gases to blow by, causing short ring life, cylinder wear, and excessive gas waste. If you widen the groove and put in a wider ring, you are changing the original specifications of the engine manufacturer and inviting trouble. If you put in an ordinary spacer, you have merely put in a wider ring in two sections.

The new Sealed Power GI-60 Contracting Groove Insert is not a "spacer." It does not float, but is anchored securely at the top of the ring groove. Before the GI-60 is installed, the top groove is re-grooved to an absolutely true surface 1/32" wider than the original groove, with a 1/32" recess at the top. Into this recess the GI-60 Groove Insert is fitted, locking itself permanently in place, forming a heat-treated spring-steel shield that resists wear and pounding of the top land better than either aluminum or cast iron can resist it.

Your Sealed Power jobber is now equipped to furnish this service for you. It is the only dependable, economical answer to top ring groove wear. It is equally effective in worn or new replacement pistons. The cost is low and the benefits are great. Thorough field tests by commercial fleets have proved the efficiency and value of GI-60 beyond any doubt. Ask your jobber now for this new Sealed Power service.



And when you need new pistons it will pay you to specify Sealed Power Heavy Duty Pistons



SEALED POWER PISTON RINGS

SEALED POWER CORPORATION

MUSKEGON, MICHIGAN • STRATFORD, ONTARIO

Use postage-paid card inserted at page 103 for free information on advertised products

CCJ NEWSCAST



IHC PRICE REDUCTIONS

International Harvester Co. has announced price reductions effective before April 1 which apply to a selected list of products in the company's line of motor trucks, tractors, farm machines, and industrial power equipment.

A statement by John L. McCaffrey, Harvester president, in explanation of the price reductions, said in part:

"We cannot reduce prices on all our products. Some of our products lose money, some barely break even and some show a profit. The reductions will therefore not be uniform and each one will be individually made.

"We will announce the exact list of our products which will be affected and the amount of the reduction on each just as rapidly as we can complete the work of computing new prices."

BETTER BRIDGES URGED

Verne M. Drew, representing the Truck-Trailer Manufacturers Association, urged delegates to the annual convention of the American Road Builders Association in Chicago to extend their interest in highways "beyond a constructional phase" and to join with automotive manufacturing and highway user groups "in defense of motor haulage against adverse legislation, adverse taxing policies and all other forms of attack."

In particular, Mr. Drew called on the road building industry to pledge itself in support of the principle that bridges in the nation's highway system should not be permitted to continue as the "weakest links" in the highway chain.

ATA FIGHTS REPARATIONS BILL

The American Trucking Associations, Inc., has urged the House Interstate Commerce Committee to reject a proposed reparations law under which shippers could sue for retroactive overcharges after a legal rate had been ordered reduced by the ICC. At the same time, ATA spoke in favor of another provision of the measure, H. R. 2324, which would place a two-year statutory limit on filing of claims based on violations of the Interstate Commerce Act "because it would give motor carriers a uniform and reasonable degree of protection against suits based upon ancient violations of commission or omission, violations which in most cases were unintentional."

DATES AND DOINGS

MAY 5-9—Fleet Supervisors Training Course, University of Wisconsin, Madison, Wis.

MAY 12-15—American Trucking Associations, Annual Safety, Operations & Equipment Meeting, Hotel Cosmopolitan, Denver, Col.

MAY 15—Rhode Island Truck Owners Assn., Annual Meeting & Banquet, Narragansett Hotel, Providence, R. I.

MAY 19-23—Fleet Supervisors Training Course, University of Connecticut, Hartford, Conn.

MAY 22-24—Associated Motor Carriers, Inc., of S. D., State Convention, Cataract Hotel, Sioux Falls. S. D.

MAY 29-31—Washington Motor Transport Assn. State Convention, Olympic Hotel, Seattle, Wash.

JUNE 1-6—Summer Meeting, Society of Automotive Engineers, French Lick Springs, French Lick, Ind.

JUNE 7—Kentucky Motor Transport Assn. Annual Meeting, Kentucky Hotel, Louisville, Ky.

JUNE 12 — Central Motor Freight Assn. Annual Meeting, Palmer House, Chicago, Ill.

AUG. 21-23—West Coast Transportation & Maintenance meeting, Society of Automotive Engineers, Biltmore, Los Angeles, Calif.

SEPT. 1-3 — Mississippi Transport Assn. Convention, Buena Vista Hotel, Biloxi, Miss.

SEPT. 12-13 — Michigan Trucking Assn. Convention, Park Place Hotel, Traverse City, Mich.

OCT. 16—Motor Carrier Assn. of New York Annual Convention, Waldorf Astoria Hotel, New York, N. Y.

OCT. 26-30—American Trucking Associations, Inc., Annual Convention, The Biltmore, Los Angeles, Calif.

DEC. 5-6—Virginia Highway Users Assn. Annual Convention, Hotel Roanoke, Roanoke, Va.

JAN. 12-16, 1948—Annual Meeting, Society of Automotive Engineers, Book-Cadillac Hotel, Detroit, Mich.

CHEVROLET TRUCK RECORD

Chevrolet truck production soared to a new all-time record in February, with 36,053 units coming from the assembly lines. Previous one-month production record for Chevrolet was in August, 1946, when 34,706 vehicles were produced. Total truck production in 1946 was 265,818 units, compared with 310,768 vehicles in the peak production year of 1941.

CARRIERS' MARGIN STILL SLIM

The hope of America's trucking industry for a quick and complete recovery in the first full year of peace from the financial difficulties of the war period failed to materialize fully in 1946 as Class I motor carriers of property recorded an improved but still narrow spread between revenue and expenses.

Gross revenues of Class I carriers increased 17.8 per cent in 1946 over 1945, but expenses also climbed 14.4 per cent over the previous year, according to statistics compiled by the department of research, American Trucking Assn., Inc.

The department's report showed the carriers had an operating ratio in 1946 of 96.1, thus leaving only 3.9 cents on each dollar of gross before payment of income taxes. This was some improvement over the ratio of 99.0 in 1945, the worst year in the industry's history from a profit standpoint.

Increased motor vehicle license fees have been approved and already placed in effect in New Jersey and Maryland. The New Jersey schedule provides no increase for trucks up to 10,000 lb. but increases on a rising scale for trucks above that weight amount to from $1 to $56. In Maryland, graduated fees will be based on chassis weight, in lieu of the old horsepower rating, and range from $15 to $200.

ICC SUPERVISORS RESIGN

The Interstate Commerce Commission, last month, announced the resignation of Ellis T. Longenecker and Grant E. Syphers, both of Los Angeles, and Alfred H. Ribbink of Ft. Worth. All were district supervisors.

WHY BATTERY PRICES ARE UP

Though prices of automotive batteries have increased during the past several months as high as 62 per cent over prices in 1941, it has been revealed by The Association of American Battery Manufacturers that some costs have soared as high as 121 per cent.

As an example, a Group 1-100 amp. hour battery that cost $10.85 in July, 1941, now costs $17.45, or an increase of 62 per cent. But the cost of lead for that battery today is 121 per cent higher than it was in 1941. Antimony now costs 108 per cent more. Container costs are up from 47 per cent to 73 per cent depending upon the type used. Covers are up 51 per cent in price.

(TURN TO PAGE 126, PLEASE)



WHERE the going is rugged and tough—Midland Controls are dependable.

The tremendous power that enables giant shovels to bite out and handle huge chunks of earth and rock are controlled perfectly by Midland Control Valves and Actuating Cylinders.

Midland Power Brakes provide the same dependable control for even the heaviest motor trucks.

Midland Power Brakes on your trucks assure you safe, efficient operation at all times.

Ask the Midland Distributor, or write to us for full details.

The MIDLAND STEEL PRODUCTS CO.

6660 MT. ELLIOTT AVENUE · DETROIT 11, MICH.

Export Department · 38 Pearl Street · New York City

(CONTINUED FROM PAGE 124)

PHILA. OFFICE FOR A.B.S. CO.

The American Brake Shoe Co. has opened a new sales office at 1500 Walnut St., Philadelphia, which will be occupied jointly by representatives of the company's National Bearing Division, Kellogg Division, Electro-Alloys Division, and Brake Shoe & Castings Division.

In the motor truck line, price reductions were made on twelve basic models, all in the medium or heavy classifications. The reductions ranged from $50 to $300 or from 1.9 to 3.6 per cent. The effect of these reductions was increased by reductions made at the same time in the prices of some widely-used motor truck attachments, such as two-speed rear axles, four-speed transmissions, air brakes, and increased capacity cooling units. The estimated overall reduction on the affected motor truck models is 5 per cent.

Domestic Truck Factory Sales by Gross Vehicle Weight

	5000 and Less	5,001–10,000	10,001–14,000	14,001–16,000	16,001–19,500	19,501–26,000	Over 26,000	Total
Year, 1946	291,808	78,884	174,741	144,302	19,313	22,501	13,061	744,610
January, 1947	25,387	11,049	21,427	11,791	3,259	2,484	1,903	77,300
February, 1947	25,893	13,052	21,564	15,915	2,316	2,702	1,811	83,253
2 Mos., 1947	51,280	24,101	42,991	27,706	5,575	5,186	3,714	160,553

1947 Truck Trailer Production*

Type of Trailer	January
Vans	
Insulated and refrigerated	167
Furniture	483
All other closed top	2,817
Open top	315
Total Vans	3,782
Platforms	
With cattle and stake racks	474
With grain bodies	102
All other	1,257
Total Platforms	1,833
Tanks	
Petroleum	209
All other	33
Total Tanks	242
Pole and Logging	
Single axle	719
Tandem axle	141
Total Pole and Logging	860
Low-bed heavy haulers	198
Off-highway	83
Dump trailers	114
All other types	114
Total Complete Trailers	7,206
Trailer Chassis	317
Total Trailers and Chassis	7,523

* Prepared by Bureau of the Census, Industry Division.

ATA STUDIES ICC SAFETY RULES

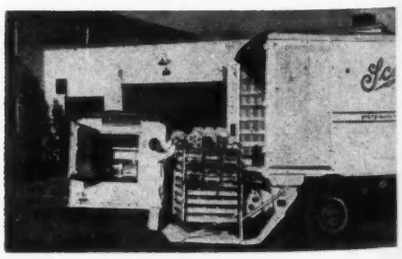
The American Trucking Associations, Inc., will sponsor a series of meetings throughout the country to determine the trucking industry's views on impending revision of the Interstate Commerce Commission's safety regulations. The consensus will be used at Commission hearings on the changes, expected to be held in May.

At the same time, the association doubled the size of its National Committee on ICC Safety Regulations, indicating the urgency and importance being placed in the proposed changes. John M. Akers of Gastonia, N. C., will continue as committee chairman.

RECIPROCAL STEEL AGREEMENT

Inland Steel Co. has licensed Carnegie-Illinois Steel Corp. and other subsidiaries of U. S. Steel Corp. to manufacture Inland's "Hi-Steel," and in return Carnegie-

(TURN TO PAGE 129, PLEASE)



Hydraulically-operated endgates that lift or lower 1-ton loads in 10 seconds are available through Fruehauf branches. This one is mounted on trailer of A. F. Schwahn & Sons, Eau Claire meat dealer

Teleoptic

Directional Signals



A Complete Line—Properly designed for every type of vehicle. Precision Built for maximum Efficiency and Durability.

Write for New Catalog and Installation Diagrams

THE TELEOPTIC COMPANY

1245 MOUND AVE. RACINE, WISCONSIN

CCJ Newscast

(CONTINUED FROM PAGE 126)

Illinois has licensed Inland to manufacture its "Cor-Ten," Joseph L. Block, Inland Executive Vice President, announced today.

Hi-Steel is a low-alloy structural steel which is being used extensively in bull dozers, structural framework, trailers, and other products demanding light weight, high strength, and great resistance to impact, fatigue, abrasion, and corrosion. Cor-Ten is a low-alloy, high-tensile steel also used in a variety of specialized applications.

SAFETY SUPERVISORS GROUP

A Safety Supervisors Section of the Massachusetts Safety Council was organized some months ago, with headquarters in Boston, for the purpose of providing a common ground for discussion of commercial vehicle supervision and accident prevention work. It also promotes and encourages proper supervision, training, maintenance and safety in commercial vehicle operation.

Already, membership, which is limited to graduates of Motor Vehicle Supervisors Training Courses, represents an aggregate of 10,000 vehicles. Officers are: Joseph Beck, M & M Transportation Co., president; Arthur Bowes, Boston, Worcester & N. Y. St. Railway, vice-president; Preston Huband, P. B. Mutrie Motor Transportation, Inc., treasurer, and Albert LaRosee of the Registry of Motor Vehicle staff, secretary.

Inquiries concerning the section should be addressed to Joseph Beck, M & M Transportation Co., 250 Mystic Ave., Somerville, Mass.

1 TRAILER = 5 BOXCARS?

Taking note of transportation difficulties reportedly growing out of an acute railroad boxcar shortage, Julius L. Glick, president, Truck-Trailer Manufacturers Association, suggested last month that shippers consider greater utilizing of highway vehicles.

"It has been estimated that a single tractor semi-trailer rig on relatively short hauls can do the work of five boxcars," Mr. Glick said. "This is because the highway vehicle has greater flexibility and quicker turn-around time.



Under supervision of a Goodyear engineer, the right front tire of this Refiners Transport & Terminal Corp. truck was "blown" with a dynamite cap while hauling 18 tons of oil down a slippery grade. Thanks to its Life-Guard tube, the truck continued on course, came back to the home garage before tire became partially flat

"PACKAGED" TACHOMETERS

Truck dealers can now sell "packaged" Motor Mile tachometers, and installation can be made in truck operators' or dealers' shops, under a new merchandising plan just announced by the Instrument Division of Stewart-Warner Corp.

Heretofore installation has involved the specification and ordering of necessary adapters, flexible shaft and other elements, seriously restricting over-the-counter purchase and immediate installation. Under the new packaged plan, all required elements are packed in a carton plainly labelled with the make or model of truck for which a unit is intended. While a dealer would ordinarily carry such complete packages for the truck he handles, his ordering for installations on other makes of trucks is simplified.

The package contains the tachometer, steering post mounting bracket, the required drive adapter, a flexible shaft of proper length and the necessary bolts for mounting.

292,000 AWARD WINNERS

Commercial vehicle drivers who have won the National Safety Council's Safe Driver Award now total 292,000, according to an announcement from the Council.

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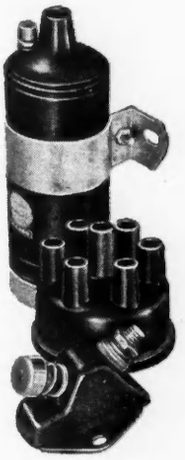


Regardless of whether you make short or long hauls, carry light or heavy loads, drive at low or high speeds, you can keep your fleet fit for service with NIEHOFF Products.

30 years of manufacturing experience, the engineering of all NIEHOFF parts to standard industrial tolerances or better, plus a rigid inspection at the factory —guarantees quality and performance.

Each NIEHOFF part is attractively packaged and plainly marked for quick, easy identification. One simplified catalog with a single code for all major ignition systems speeds up ordering and service.

Ask your Jobber for NIEHOFF Products today.



C. E. NIEHOFF & CO.
4925 Lawrence Ave., Chicago 30, Ill.
BRANCHES: 1342 S. Flower St., Los Angeles 15, Calif.
250 W. 54th St., New York 19, N. Y.

NIEHOFF

APPROVED QUALITY PRODUCTS

CCJ Newcast

(CONTINUED FROM PAGE 129)

Of these, only seven drivers have qualified for 16-year awards and 52 have won 15-year awards for safe driving. Many 15-year award holders, however, are expected to qualify for the higher award this year. No driver can qualify for an annual award if he has had a preventable accident that year.

Drivers are qualifying for the awards at the rate of approximately 25,000 a year, the Council said. The popularity of the awards, which have long been recognized as a national standard for safe driving achievement, has prompted the Council to issue a new booklet, attractively illustrated in color, titled "For Experts Only." In addition to explaining the award system, which is in no sense a contest, the booklet also serves as a manual of safe driving. The booklet in single copies or quantity lots may be obtained from the National Safety Council, 20 North Wacker Drive, Chicago 6, Ill.

BANTAM ENTERS SECOND YEAR

American Bantam Car Company, Butler, Pa., in April enters its second year of producing Bantam Supercargo Truck Trailers.

Francis H. Fenn, president and chairman of the board of Bantam, announced that the occasion will be marked by a national advertising and promotion campaign, stressing the principal features of the line.

Bantam's independent distributor organization has grown rapidly during the past year and is expected to cover all areas from the Atlantic Coast to the Rocky Mountains by the end of 1947.

Most recent distributor appointments include Truck Supply Co., Inc., West Springfield, Mass.; Smith-Moore Body Co., Richmond, Va., and Truck & Trailer Equipment Co., Akron, Ohio.

TIMKEN BRAKE PLANT

Construction has been started on a new axle brake plant for the Timken-Detroit Axle Co., at Ashtabula, Ohio.

Located on a 45-acre site on the eastern outskirts of Ashtabula, the new, modern brick and steel building will contain 80,000 sq. ft. of floor space for the manufacture of Timken brakes and related parts. Besides the latest in manufacturing equipment, the new plant will contain complete facilities for research and testing.

All operations in the new plant will be under the supervision of Ray L. Morrison, General Manager of the Timken Axle Brake Division.

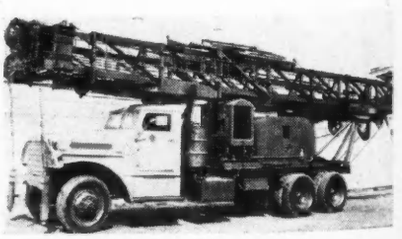
J. A. DONNELLY DIES

Joseph A. Donnelly, well-known truck industry figure in the Mid-West, died in Chicago March 9. He was vice-president and district manager for the Autocar Co. until last Jan. 1 when he resigned because of failing health. Prior to going with Autocar in 1930 he was Minneapolis and Chicago branch manager for Mack.

NEW STERLING TOOL PLANT

Plans for the new plant to be constructed by Sterling Tool Products Co., Chicago, have been announced by S. A. Crosby, President. The company has purchased 187,000 sq. ft. on the southeast corner of Hawthorne and Armitage Aves. in Melrose Park. The one-story combined factory and office will contain 95,000 sq. ft. of floor space. The first unit of 45,000 sq. ft. is being built with the remainder of the plant to follow as soon as the first unit is occupied.

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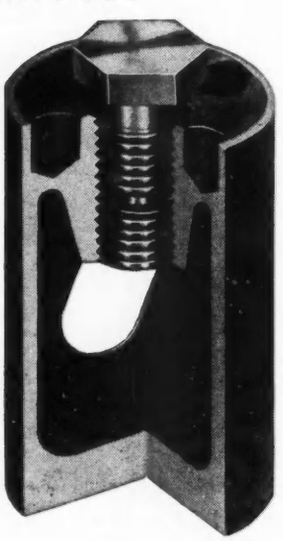


Recommended for oil wells up to 5500 ft. with 2½ in. tubing, this Standard Oil Co. (Cal.) rig features a Hercules DRXC diesel power unit with double drum hoist mounted on White truck. Derrick can be raised to working position in about 10 minutes

there's profit in replacement!

WITH . . . Johnson TAPPETS

For FORD and MERCURY V-8's---
THE JOHNSON *adjustable* TAPPET:



You can't go wrong when you install this **JOHNSON** *adjustable* Tappet in Ford and Mercury V-8's (85 — 100 HP engines). You make more profit and gain more satisfied customers.

Special spanners are included with each set of tappets, leaving both hands free for quicker, more accurate adjustments . . . without fitting of valves and with cylinder heads in place. Once adjusted, the **JOHNSON** Self-Locking Tappet Screw maintains its setting and gives many thousands of miles of superior engine performance.

JOHNSON Tappets are designed and produced by "Tappet Specialists" . . . suppliers of tappets of all kinds to America's leading engine builders.

FACTORY-DUPLICATE TAPPETS ARE ALSO AVAILABLE FOR POPULAR MAKES OF CARS AND TRUCKS

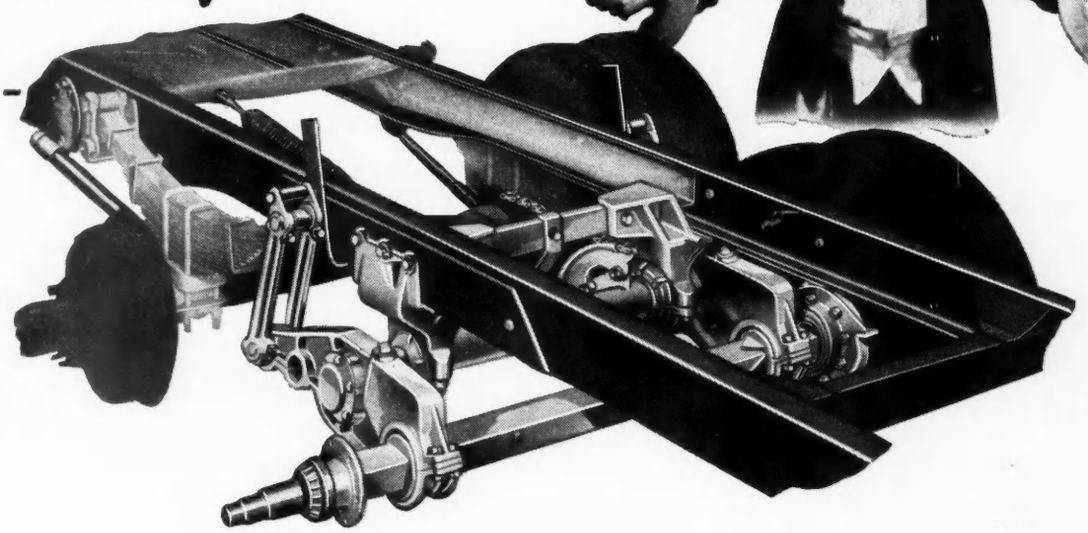
DISTRIBUTED TO N. A. P. A. JOBBERS
By BALKAMP of Indianapolis

CALL YOUR N. A. P. A. JOBBER TODAY

Johnson PRODUCTS INC.
MUSKEGON, MICHIGAN
"Tappets Are Our Business"

YOU DON'T NEED MAGIC TO PROFIT WITH THIS NEW *Money Saver*





No tricks involved! A glance at facts and figures will show how you save money with the new, improved Truxmore 3rd Axle.

First of all, it enables a standard medium or heavy-duty truck to *carry two payloads instead of one . . . far more payload per pound of truck.* No matter how you figure, that saves you money . . . adds to your profits.

Secondly, it carries your load with safety and economy. That's because only the Truxmore 3rd Axle has Gravity Spring Suspension.

This exclusive development provides greater stability for the truck with or without load. It keeps all three axles, six brakes and ten tires in constant contact with the ground . . . gives the load a "bumpless ride."

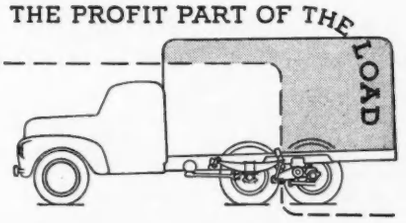
More than that, a Truxmore-equipped truck is easy to maneuver. It backs and steers just like your car! No sidesway! No jackknifing! No specially trained drivers needed!

Thousands of satisfied users have enjoyed advantages of Truxmore safety and economy for years.

And now Truxmore engineering brings you advancements that make this new improved 3rd axle compact, light in weight and specially designed to handle any type job . . . with models to fit truck bodies up to 26 feet.

Ask your truck dealer or local Truckstell distributor for details about the new Truxmore 3rd Axle. Or write The Truckstell Company, Union Commerce Bldg., Cleveland 14, Ohio.

THE PROFIT PART OF THE LOAD



YOU SAVE MORE WAYS WITH A TRUXMORE 3RD AXLE

In addition to a smoother, safer ride and greater ease of handling, Truxmore Conversion gives your medium or heavy-duty truck economies no other type truck of the same capacity can match. In fact, a Truxmore 3rd Axle can SAVE you up to:

40% on original truck cost
50% on insurance premiums
20% on gas and oil
50% on tire and replacement costs
20% on road time

*It carries **2** payloads instead of **1***

TRUXMORE 3RD AXLE

Mfd. by TRUCK EQUIPMENT COMPANY Buffalo, New York

Approved AND DISTRIBUTED BY TRUCKSTELL
SPECIALIZED EQUIPMENT FOR PLUS PERFORMANCE

CCJ Newscast

(CONTINUED FROM PAGE 130)

BUFFALO TIES IN WITH NAPA

The Buffalo Fire Appliance Corp., Dayton, O., has completed arrangements with the National Automotive Parts Association for exclusive automotive distribution of Buffalo 1-qt. and 1½ qt. VL fire extinguishers.

Shipments of stocks to the 39 strategically located NAPA warehouses throughout the country already are under way. The VL, or vaporizing liquid, type of extinguisher is said to cover a wide range of fire hazards encountered in the automobile industry, including electrical, gasoline, grease, oil, paint, and under-the-hood engine fires.

PLOMB ACQUIRES NEW PLANT

Acquisition of the J. P. Danielson Co. factory in Jamestown, N. Y., has been announced by the Plomb Tool Co., Los Angeles. The new plant provides additional facilities for manufacture of pliers, adjustable wrenches and pipe wrenches. Plomb's two plants in Los Angeles are now supplemented by factories in Chicago, Jamestown and Portland, Ore.



HENRY FORD, PIONEER

Henry Ford, automotive pioneer, founder of the Ford Motor Co. and father of mass-production technique, died of a cerebral hemorrhage at the age of 83 in his Dearborn home on April 7.

At an early age Henry Ford displayed unmistakable signs of mechanical genius. His first conception of a "horseless carriage" was a steamer with a 2x2-in., single-cylinder engine, with a belt from the engine shaft to a countershaft, and sprocket and chain from this to the differential gear. The boiler proved too much of a puzzle and he abandoned steam in favor of gasoline. In April, 1893, he seated himself in his first gas-powered invention and made a test run without mishap. According to the best available data, this was the second gasoline car that ran in the United States. Charles E. Duryea is credited with building the first.

The engine of the first Ford was a 2-cylinder, horizontal, 4-cycle, water-cooled affair with flywheel between the cylinders, and cranks on the ends of the shaft outside the bearings. Bore and stroke were 2 9/16 in. and 6 in. It developed 4 hp., had 10 and 20 m.p.h. speed after the engine had been started by hand, but was without reverse. In 1896, Mr. Ford sold it for $200, and commenced work on his second car. This seems to have been the original of his commercial development. It was of the 2-cylinder opposed type and was completed in 1898. Such an engine with a 4-in. bore and 4-in. stroke was in the car when the Ford Motor Co. was organized in 1903 with a capitalization of $100,000; only $28,000 of which was subscribed in cash. The company had 12 stockholders and the ones that held on ended up with millions. One who had invested $900 drew out $39,500,000.

The industrial empire which Mr. Ford developed is now worth more than one billion dollars. More than 31,000,000 vehicles have been built bearing the name of Ford.

Henry Ford's activities had a beneficial influence on the automotive industry. Perhaps his greatest service was his successful fight on the Selden patent, which relieved the industry of a menace and permitted manufacturers to turn their full attention to production and sales problems.

(TURN TO PAGE 242, PLEASE)



Pacific Transport Co. of Bellevue, Wash., decked out this Kenworth tanker for a Seattle safety parade. The huge sign reads: "Pacific Transport, Inc. First Award Winner—Nation Wide Contest. 1,267,022 miles and only one chargeable accident. How Is Your Record?"

SHULER AXLES

Almost everybody knows of "Shuler Axle" as a highly-competent manufacturer of fine, heavy-duty trailer axles — but some are not familiar with the *completeness* of the Shuler line. If you are looking for a good source for any of the items listed below, we invite your correspondence. Shuler maintains an experienced engineering staff, and complete die, forge and machine shops. We have the facilities and the *will* to serve you promptly and well. Drop us a line today.

COMMERCIAL TRAILER AXLES—One-Piece Tubular or Square

Capacities in one-piece tubular: 8,000, 11,000, 13,000, 17,000, 18,000 and 25,000 lbs.

Capacities in one-piece square: 7,500, 10,000, 12,000, 15,000, 18,000, and 25,000 lbs.

Track Sizes: Standard and special track sizes available in all models.

Brake Sizes: 4″, 5″, 6″, 7″, and 8″ — Air or Vacuum.

Hubs: for all sizes of Budd 6 and 10 Stud, Chevrolet, Ford or Motor Wheels. Axles provided for Dayton and Erie Cast Wheels. All sizes of axles available for Tandem Units.

Special West Coast Axles (engineered and developed for West Coast applications).

MACHINERY TRAILER AXLES—With Trunnion Mounting

Capacities: 11,000, 13,000, 16,000, 18,000 and 25,000 lbs. per axle. *Brake Sizes:* 12-1/4 x 5 for 15″ wheels.

Hubs: for 5 and 6 Stud Budd or Motor Wheels. Axles provided for Dayton and Erie Cast Wheels.

FRONT AXLES

For heavy-duty trucks and off-the-highway equipment. Capacities and specifications available on request.

HOUSE TRAILER AND FARM WAGON AXLES

Front-knuckle steer and rear axles in 2,000, 3,000 and 4,000 lbs. per axle capacities, with or without mechanical brakes and wheels.

BRAKES AND DRUMS

Mechanical, for vacuum or air actuation. Capacities and specifications to meet every need.

AUTOMOTIVE SPECIALTIES

Fifth-Wheel King Pins—Carbon or Alloy Steel, standard SAE size for bolting, riveting or welding. . . . Stub Spindles in stock and special sizes for every application. . . . Tow Bar Hitches (Lunette Eyes). . . . Forged Spring Seats. . . . Air and Vacuum Diaphragm Brackets. . . . Miscellaneous Forgings for the Truck and Trailer Industry. . . . All these and others are available from Shuler. *Write us today for sizes, specifications and prices.*

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Export Division: 38 Pearl St., New York, N. Y. ● West Coast Warehouse: 1280 45th St., Oakland, Cal. ● Detroit Office: 8424 Woodward Ave.

Quiz Answers

CCJ Quiz on P. 118

1. a. Bow-legged. Camber means that the distance between the two front wheels is slightly less at the bottom than at the top.

2. b. The way the steering post of a bicycle leans back is a good example of caster effect. This results in a tendency to steer straight ahead. It is possible to ride with hands off the handlebars because of this caster effect. On trucks, caster gives the wheels a trailing action which automatically keeps them in a straight ahead position, bring them back into line after a hole, rut, or object has been struck or a turn has been made.

3. c. Toe-in is the turning in of the front wheels. The distance between the wheels is less at the front than at the rear when the truck is standing still. This has a tendency to compensate for the action that takes place when the truck moves forward. When the truck moves forward, the push of the road against the tires tends to take up all the play in the supporting parts, so that the front wheels then become pointed straight ahead.

4. b. Toe-out comes into play when a turn is made. It is the outward inclination of the wheels at the front on turns. It is required to make up for the difference in radius that the two front wheels follow when a turn is made, the inner wheel making a sharper turn than the outer wheel.

5. d. The fifth factor is kingpin inclination. It is the slanting of the upper end of the kingpin sidewise toward the center of the vehicle. It avoids hard steering and reduces the tendency to toe-out.

6. c. Wander, It is caused by too little caster.

7. d. Tests show that with only ½-in. misalignment the tire will be dragged 87-feet sideways for every mile of travel. As to tire wear, this has the same effect as scouring the tread with coarse sandpaper.

8. a. The right wheel. The inner wheel must turn more sharply and on a shorter radius. This sharper turning of the inner wheel is made possible by the relationship of the steering knuckle arms and tie rods.

9. 2—a.
   3—b.
   4—c.
   1—d.

10. a. False. In degrees.

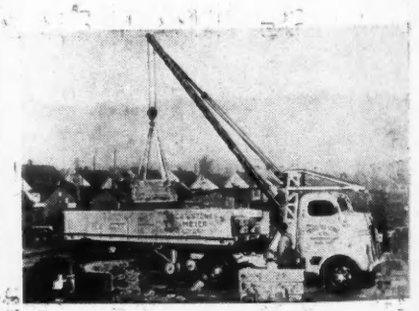
b. False. A few trucks are exceptions. Some models of Autocar and Stewart trucks even have negative caster.

c. True, if you follow the manufacturers' recommendations.

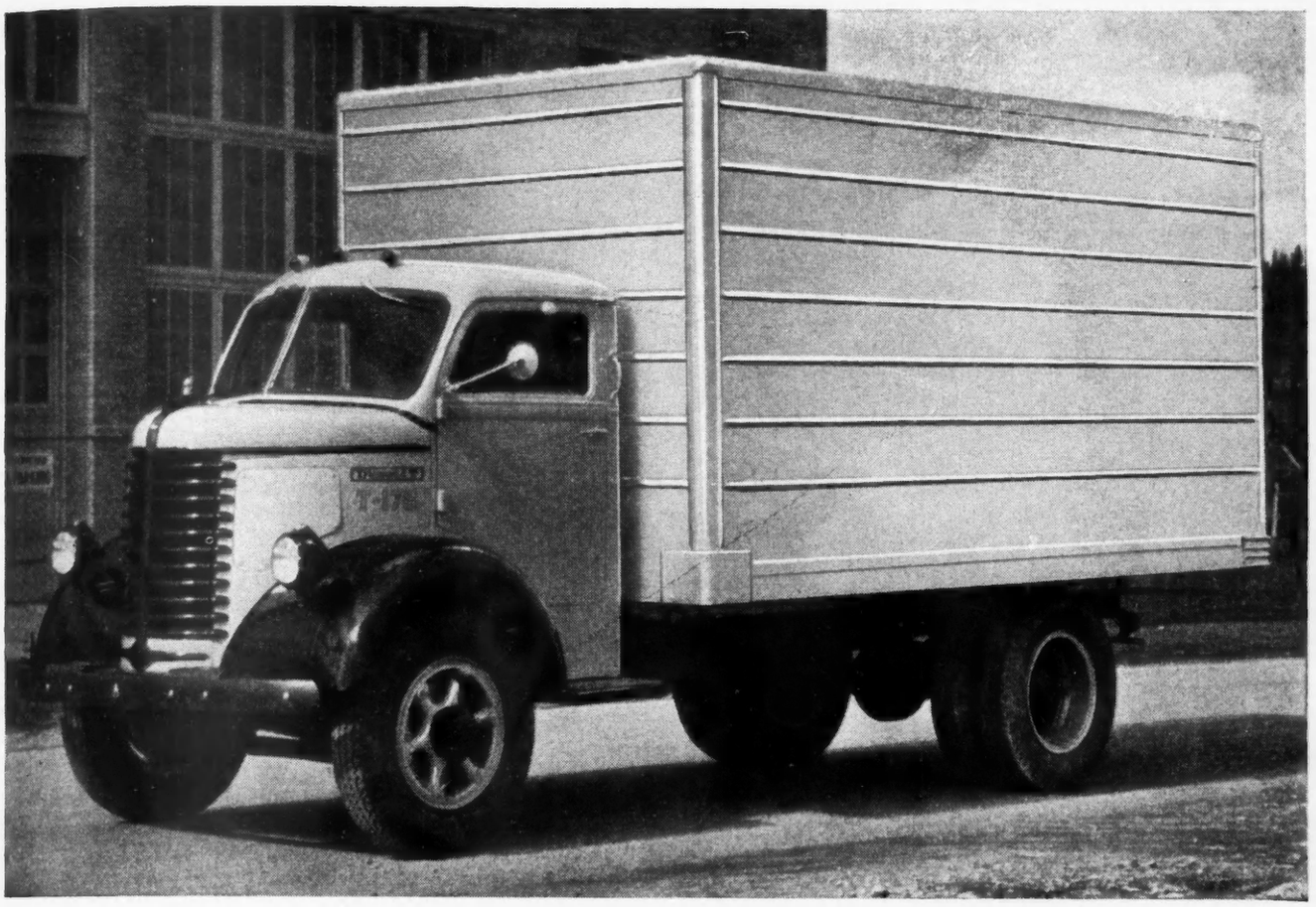
d. True.

e. True.





Fruehauf Trailer Co. helped work out this novel rig for a cut stone contractor in Detroit. The power operated crane, mounted on the tractor, can reach all areas of the 15-ton trailer and boost the load with considerable precision to second story levels



Feature For Feature Brown Aluminum "Cargo Vans" Set the Pace for Truck Bodies

When you buy you want to get the most for your money. That's why we suggest you compare these features. See for yourself why the Brown "Cargo Van" is fast becoming the choice of fleet owners —

Light Weight. Made of weather resistant Alclad aluminum with exclusive frameless monocoque construction these bodies keep weight to a minimum without sacrificing strength.

Attractive Aluminum Finish. Requires no painting or upkeep. Gives your trucks a continuous smart appearance.

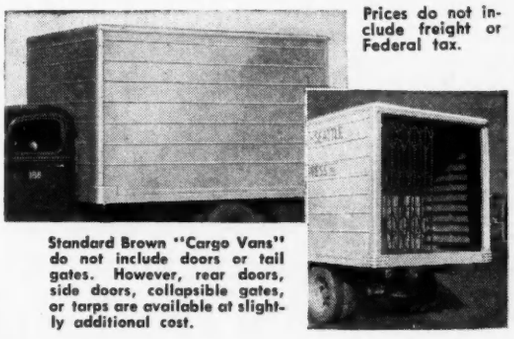
Natural Reflective Insulation. The bright aluminum finish is highly reflective and acts as an insulation to keep interior cooler. Supplements any additional insulation.

Durable. Strong, corrugated aluminum alloy panels supported by stiffeners at 2-foot intervals eliminate space consuming frames without sacrificing strength. Integral design transmits stresses to all parts, creates in effect a large tube of great strength.

"CARGO VAN" SPECIFICATIONS

Size	Weight	Width (Over-all)	Height (Over-all)	Cost
12 ft.	1,000 lbs.	92 in.	86 in.	$803
14 ft.	1,170 lbs.	92 in.	86 in.	$895
16 ft.	1,340 lbs.	92 in.	86 in.	$995

Prices do not include freight or Federal tax.



Standard Brown "Cargo Vans" do not include doors or tail gates. However, rear doors, side doors, collapsible gates, or tarps are available at slightly additional cost.

Brown truck bodies are sold through authorized distributors. Order from your nearest Brown distributor. Or, if there is no Brown distributor in your immediate area, have your local distributor contact Brown Industries for information. Shipped in sections in carload lots to distributors.

Brown

ALUMINUM TRAILERS

Brown Industries

Spokane 1, Washington

WASHINGTON RUNAROUND

by GENE HARDY
CCJ Washington Bureau

ICC Drafts New Safety Rules . . . Bares Enforcement Teeth . . . Postpones Front Brake Tests
Strong Support for 5-Year Census . . . Truck Output Strong . . . Congress Ponders Natural Rubber

ICC Drafts New Rules

The Section of Safety, Bureau of Motor Carriers, ICC, will have ready about May 1 a draft of the overall revision of the motor carrier safety regulations, with the possible exception of Part 7. Transportation of explosives and other dangerous articles is covered by Part 7. Reason for the delay in regard to Part 7 is reported to be the question of jurisdiction within the ICC, a point which has been raised in the past by the American Trucking Associations, Inc. The draft to be presented by the Section of Safety will be used as a basis for informal conferences, prior to public hearings on the proposed revisions.

While they would be covered as part of the overall revision, the ICC has indicated that quick action may be expected on hearings on two parts of the rules, those pertaining to the definition of the work week and drivers' logs. These sections have aroused considerable interest in the trucking industry and it is likely that hearings will be held in advance of the hearings on the overall revision.

—Bares Enforcement Teeth

Within the last month, the ICC has bared its teeth in regard to enforcing the present safety regulations. In cases of repeated violations the Section of Safety checks with the Section of Certificates to determine whether the carrier in question has any request for extension of operating rights pending. If so, the carrier is stopped in his tracks.

In talking with CCJ, an ICC spokesman said "we have no qualms about curbing the expansion of motor carriers whose past experience from the standpoint of safety has been unhealthy."

While the refusal of operating authority and the question of the carrier's fitness to operate is a new approach to the enforcement of the safety regulations, the ICC is not abandoning its policy of taking offenders to court. It is felt that the refusal of operating rights is a more effective means of forcing compliance in some instances and the ICC is now viewing continued and deliberate violations as indicative of the applicant's unfitness to receive an extension of operating rights.

In two recent cases involving repeated infractions the Commission applied its new policy. In the first instance, Division 5 flatly denied the petition for extension of operating rights, and in the other case hearings were ordered to determine the applicant's willingness to conform to the regulations.

—Postpones Brake Tests

The ICC decision on the petition of western operators to lift the rule requiring front-wheel brakes on large vehicles may be put off until next winter. It is generally conceded by experts that it is now too late to start tests, although the Commission may decide otherwise, despite the fact that the results of tests started at this late date would be practically meaningless.

(TURN TO PAGE 138, PLEASE)



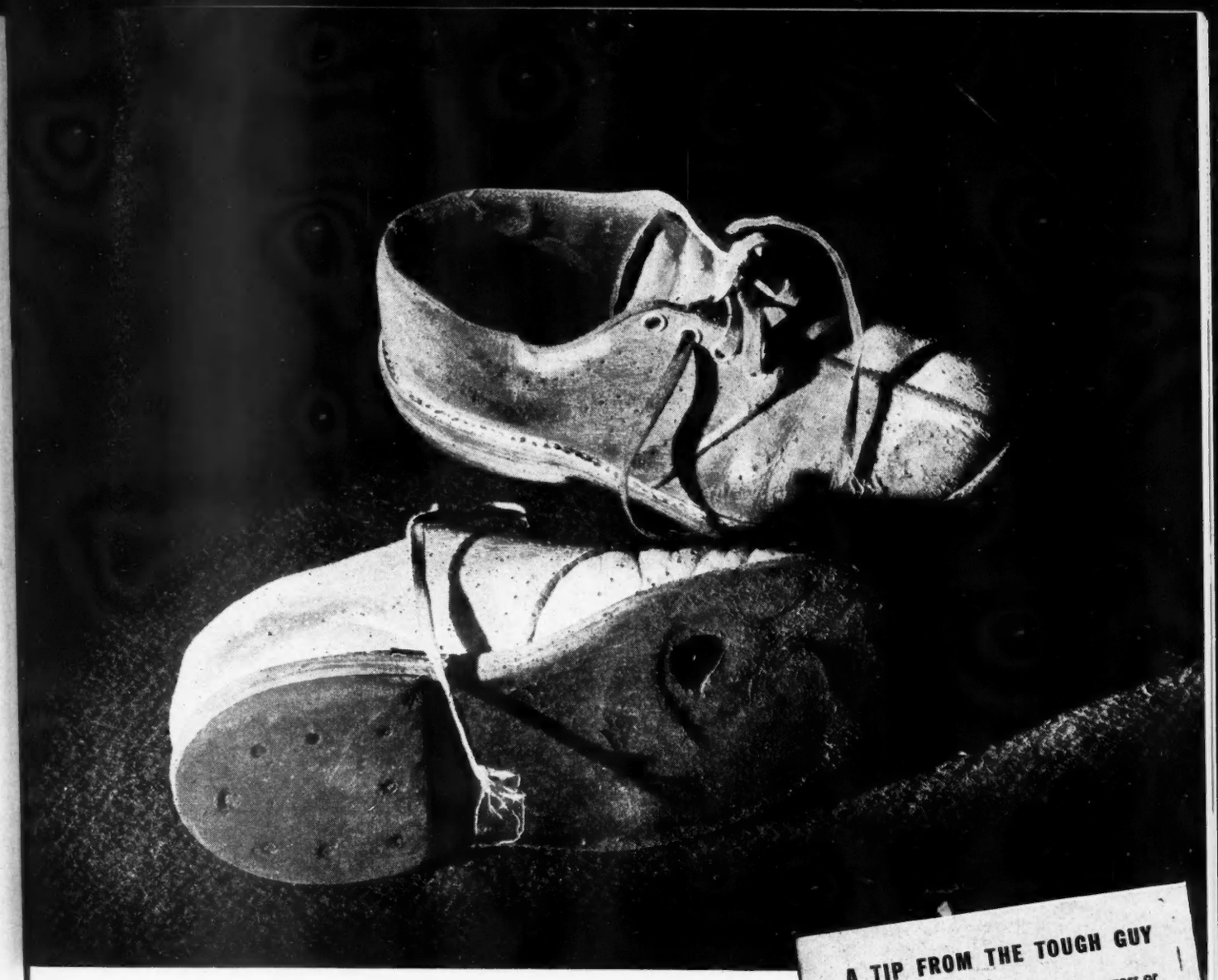
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for hard-working gasoline-driven fleets

Now . . . AMALIE gives you a superior fleet oil for cleaner engines and smoother, trouble-free performance under toughest operating conditions. It's AMALIE E-D (Extra Duty). It has the naturally greater oiliness of all AMALIE oils — straight-run refined from premium Pennsylvania crudes — plus *extra-duty* efficiency resulting from the addition of special war-developed ingredients. Fights carbon, sludge and varnish. Prevents bearing corrosion. Ends ring sticking. Guards vital parts against wear. Prolongs engine and oil filter life. Raises gas and oil mileage. It's *stabilized!* So keep engines cleaner, cut down repair layups — with AMALIE E-D.

FOR DIESELS: Specify AMALIE H-D, the *complete* heavy-duty oil.

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A TIP FROM THE TOUGH GUY

No matter what your units haul, passengers or freight, they must pay their way—and piston rings can play a major part in holding down maintenance costs.

Piston Rings wear out, too

Of course piston rings wear out. They're designed that way—to "take" the wear, to protect the engine.

The next time you replace a set of worn-out rings, install Hastings Steel-Vents. They're built with a light, flexible inner ring that lasts and lasts. And their *soft pressure* action means they're gentle on the cylinder walls, too.

Hastings Steel-Vent "motor engineered" sets are a favorite with bus and fleet operators because they work equally well in rebores, resleeves and extreme tapers.

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HASTINGS

STEEL-VENT PISTON RINGS

TOUGH *on Oil-pumping*
GENTLE *on Cylinder Walls*

Washington Runaround

(CONTINUED FROM PAGE 136)

Support for 5-Year Census

Despite its original hostile reception, Sen. McCarran's bill, S. 6, which calls for a quinquennial census of transportation, is now receiving strong support both in and out of Congress. Several Senators of the majority party have indicated their approval and there is now every reason to expect favorable action on the part of the Senate. Passage of the legislation would mean that statistics never before available on motor truck operations would be collected every five years by the Census Bureau. The data would be kept current by means of the Bureau's effective sampling.

Now supporting the census of transportation are the Public Roads Administration, Agriculture Department, Bureau of Foreign and Domestic Commerce, Budget Bureau, and the Census Bureau. The ICC, standing on very shaky ground, remains in opposition.

The most telling blow supporting such a census was struck recently by the Subcommittee on Transportation of the Federal Committee on Economic Statistics of the Budget Bureau. After a long study a panel on motor transport statistics submitted a report to the Subcommittee which was unanimously approved. A summary of the findings and recommendations follows:

1. Present Federal statistics on motor transport are inadequate.

2. Really adequate data should be of considerable value to the Congress numerous Federal agencies and the public.

3. The only part of the motor carrier industry now covered by regularly recurring reports to any Federal agency are those made to the ICC by the larger or Class I interstate for-hire carriers. The exact total number of all for-hire carriers is unknown. Estimates indicate that the reports to ICC may cover only about 2 per cent of the for-hire carriers of property and 8 per cent of the for-hire carriers of passengers.

4. To provide adequate Federal statistical coverage for both for-hire and private motor carriers it is recommended:

(a) That ICC secure annual reports from the Class II and III interstate for-hire carriers now under its jurisdiction.

(b) That statistics on exempt interstate for-hire carriers and intrastate for-hire carriers be obtained through a census of for-hire transportation, the first to be taken in 1948, covering 1947.

(c) That statistics on private carriers; i.e., industries, businesses, etc., which operate trucks or buses in connection with their business be obtained by inclusion of appropriate inquiries at the taking of each census of manufactures, business, mines, warehouses and storages, service businesses, agriculture, etc.

(d) That subsequent censuses of for-hire transportation be taken as of the same year or years as covered by the censuses referred to in "c" above.

(e) That the reports issued by the Bureau of the Census incorporate the basic data from the reports rendered to the ICC to the end that there may be available for the use of Government and the public uniform statistics on motor carriage of property and passengers.

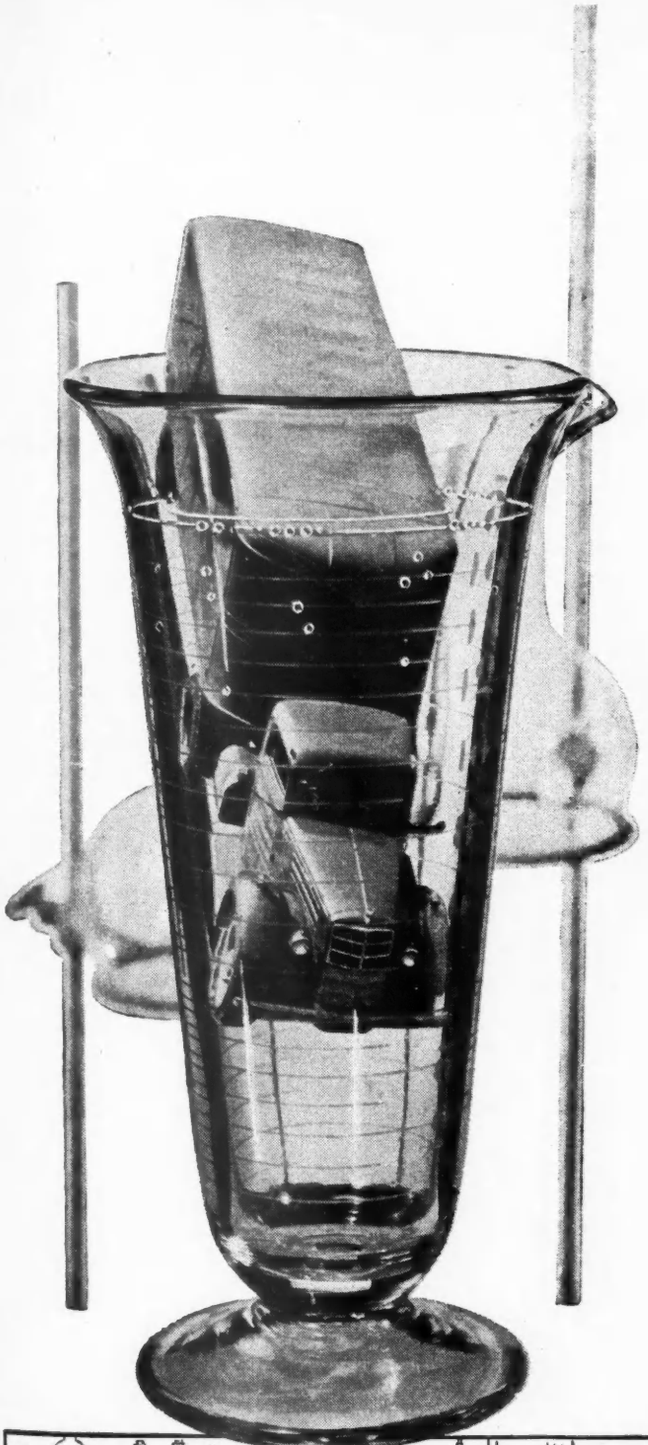
The Census Bureau has stated that, in general, it concurs with the findings of the panel. The Bureau also told Sen. McCarran that it will continue to use every power within its means to provide better transportation data.

Census is currently preparing an estimate of the funds required to cover exempt interstate and intrastate for-hire carriers, and has requested appropriations to cover a study of private carriers.

The ICC opposes the bill, but in its presentation it clearly showed that its data on motor trucks was inadequate and not sufficiently comprehensive. The Commission says it would favor such legislation if it applied to carriers other than those common and contract carriers and freight forwarders subject to the ICC act. It also states that such data is now reported to the various government agencies with the exception of material pertaining to private carriers. Actually, the ICC's position was considerably weakened when it showed that the only adequate data on certain phases of motor transportation it possessed was that collected by ODT during the war.

(TURN TO PAGE 140, PLEASE)





Why your fleet needs this Lab Service

Shortages of trucks and parts are almost as bad as during the war. This is no time to excuse avoidable repairs; it *is* time to take *extra* precautions. Here's how Valvoline can help you: In addition to the extra protection of improved Valvoline Motor Oil, Valvoline offers you expert laboratory service. As a Valvoline user, you get a thorough analysis of your drained oil to guide you in setting a safe drainage period — and to warn you if engine trouble is developing.

This added vital service is performed by men experienced in practical maintenance as well as laboratory work. It can help you avoid those costly lay-ups.

Ask your Valvoline man how you can get this service—or write

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FLEET CONTROL LABORATORY SERVICE

FREEDOM-VALVOLINE OIL COMPANY
Dept. 41D Freedom, Pennsylvania



Washington Runaround

(CONTINUED FROM PAGE 138)

Truck Output Sets Record

Commercial truck production in February reached an all-time high of 114,909 units, or 93.39 per cent of manufacturers' forecasts. Production of medium trucks exceeded the industry forecast by almost 2000 units. Only the shortage of castings and various types of steel prevented both auto and truck producers from even greater production. Auto production totaled 263,998 units as compared with 252,100 in January.

CPA's breakdown of February production is as follows:

	Forecast	*Production*	*%*
Light	54,077	47,902	88.58
Medium	55,764	57,757	103.57
Light-heavy	9,181	6,464	70.40
Heavy-heavy ...	4,017	2,786	69.35
	123,039	114,909	93.39

Manufacturers' forecasts for the next three months are as follows: March, 128,943; April, 111,464; and May 110,058.

With the expiration of CPA slated for mid-April, future monthly reports on truck production will be issued by the Automobile Manufacturers' Association.



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Body Posts • Lintels
Roof Rails • Rub Rails
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Hart Engineering Service supplies modern styling to individualize your fleet, and tools up to furnish your body builder with sections, panels and parts to build your job. Fleet identity is maintained and maintenance costs and time are slashed, since the body builder can obtain at any time the replacement parts to the original job.

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—Ponders Radioactives

The ICC Section of Certificates has received its first petition from a motor carrier asking permission to use special equipment in the transporting of radioactive materials. Admittedly a thorny problem, it will probably wait until the Bureau of Explosives of the Association of American Railroads completes its work on the general problem of transporting such materials.

—Bars Dual Saddle-Mount

In ruling that auto driveway operators may not transport more than one vehicle by the saddle-mount method and that a full-mounted vehicle may not be carried on a vehicle towed by the single saddle-mount method, Division 5 of the ICC also rewrote the safety regulations governing driveway operations.

Effective April 1, the order also covered the following points:

1. Correction of brake deficiencies.
2. A provision that tow-bars shall have adequate strength.
3. A provision that tow-bars may be attached to bumpers of new vehicles only.

Other changes are designed to secure the structural adequacy and to assure the proper functioning of tow-bars and single saddle-mounts. Still others are designed to promote safety in driveway operations and apply more particularly to methods of operation than to details of design and construction.

In its findings Division 5 cited the increase in the accident rate and in setting forth its policy in regard to this case placed itself in a position which might be difficult to defend in the future when it said:

"Congress has imposed upon us the duty to establish reasonable requirements with respect to safety of operation and equipment of common contract and private carriers by motor vehicles. The responsibility is ours to see to it that so far as possible the operations of such carriers are reasonably safe. *If we have any doubt about the safety of a proposed new type of motor carrier operation, we should not approve it even though it appears that it might be as safe as some existing operation and that it probably will permit the performance of a cheaper service with resulting advantage to shippers and carriers.*"

Collective Rate-Making Note

The Reed-Bulwinkle bill authorizing the exemption from the anti-trust laws of participants in collective rate-making agreements is due to get the okay of Congress, but there are indications that Administration forces may be able to induce President Truman to veto the measure.

Ponders Natural Rubber

Record tire production continues unabated although at the time of this writing a major strike loomed in the rubber industry. Production in the first two months of the year was well above the fourth quarter of 1946. In January and February production of truck bus tires averaged 375,000 units weekly.

The average for passenger car sizes was more than 1,600,000 weekly.

(TURN TO PAGE 240, PLEASE)



Precision-made Asbestos Millboard

. . . is manufactured by Victor without organic binder, with tolerance of ± .0025" and uniform compressibility, by controlling the fibre structure and density.

Perfect Overlapping

. . . is achieved by careful consideration of radii describing holes, gauge of metal and thickness of gasket, based on Victor's experience.

VICTOR

The Greatest Name in the Gasket Industry

. . . has been built through years of painstaking research, craftsmanship and attention to manufacturing detail. As compression ratios of auto motors increased, with corresponding increases in pressure and temperature, Victor began to produce their own Asbestos Millboard. Experience has enabled them to develop accurate tables for computing perfect overlapping. And, since all gasket dies are produced by Victor craftsmen, accurate fitting is assured.

Victor's experience, research and production facilities are available to you. We welcome the chance to study your problem. VICTOR MANUFACTURING AND GASKET COMPANY, Box 1333, Chicago 90, Illinois.

Accurately Cut with Steel Dies

. . . made by Victor's skilled tool and die makers, Victor gaskets are uniform and fit perfectly as original or replacement part for the engine.

Exact Dimensions

. . . which conform to all manufacturers' specifications are followed in producing gaskets that line with motor block openings and studs.

Manufacturer of **SEALING PRODUCTS** *Exclusively*

VICTOR
GASKETS AND OIL SEALS

VICTOR

GASKETS • OIL SEALS

Pointers on Tire Repair

(CONTINUED FROM PAGE 61)

may be recapped or retreaded. In such cases the repair should be made and cured before the tread is removed. Tires containing previously made repairs may be recapped only when the repairs are solid and sound and have been made by standard methods with new, strong materials.

Casings Not Repairable

TIRES showing excessive age and deterioration, having badly checked sidewalls, chafed beads and extensive breaks in the cord body should be rejected as unfit for repair and retreading. Conditions, of course, will vary with the age of the tire, the type of fleet operation, and service intended, but the following types of casings are not considered fit for repair:

1. Tires worn thru breaker strip.
2. Tires with broken beads.
3. Tires with badly checked or cut sidewalls, radial cracks, etc.
4. Tires showing evidence of extensive ply separations.
5. Tires showing evidence of having run flat.
6. Tires that have been run under overloads.
7. Tires with tread injuries larger than 50 per cent of the cross section.

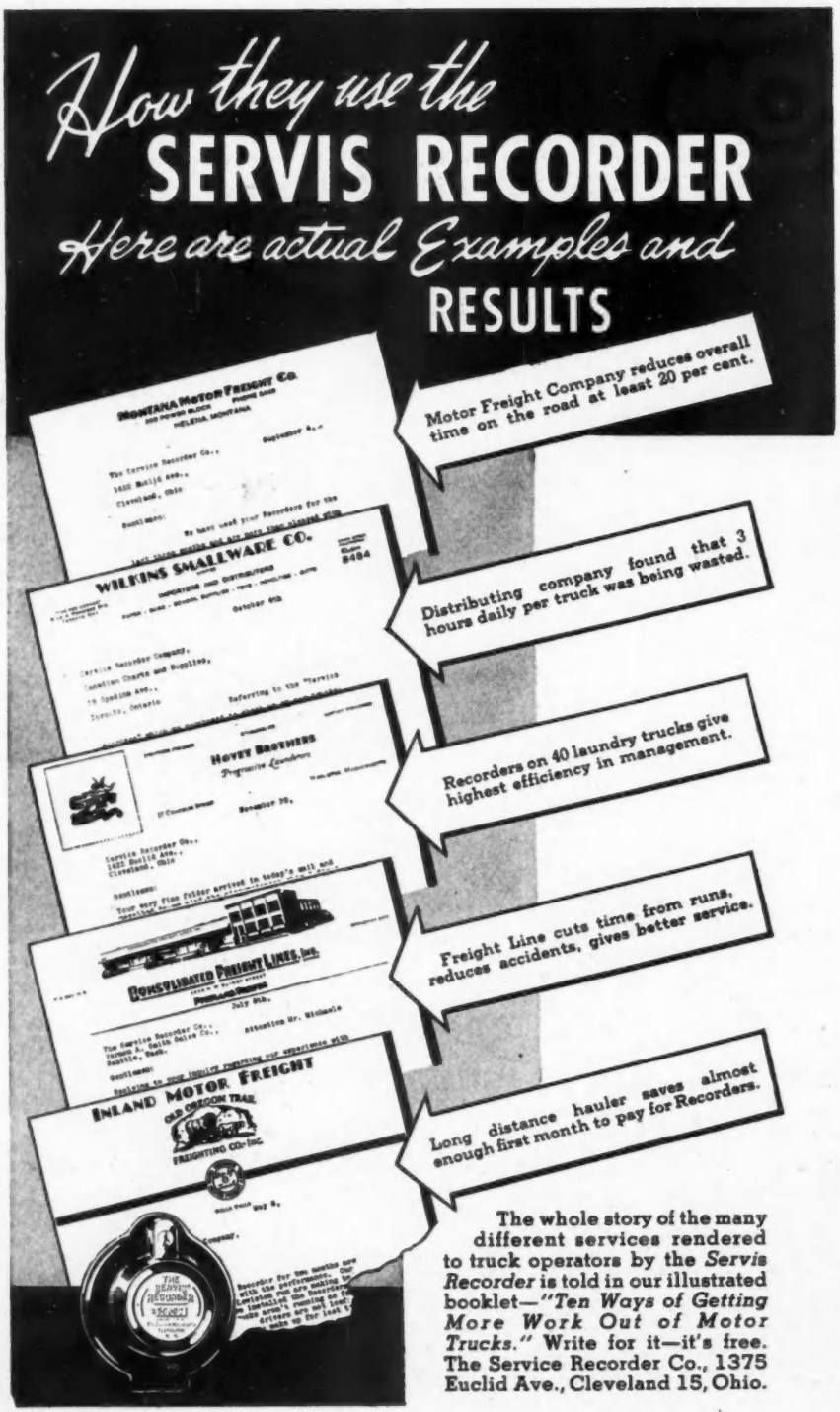
CORD SEPARATIONS—It usually does not pay to attempt repair of tires with cord separations. The tireman should be skeptical of casings in this condition, as it is possible that the tire has been run underinflated, is too old for practical repair, or has been subject to excessive heat so that other spots may break out later.

PLY SEPARATION—Tires with extensive ply separation should not be repaired for the same reason. However, if the fleetman cares to take a chance, the separated part can be cut away and a reinforcement repair made. It should be remembered that reinforcements of this type cut down the flexing ability of the casing and limit the potential life in the tire.

DEFECTIVE SIDEWALLS — Badly checked or spongy sidewalls usually indicate that the tire is too old for repair. Sometimes, if the radial cracks do not extend into the cord the tire can be salvaged, but these should be screened carefully as their further use is very doubtful.

WEATHER CHECKS—Tires with weather checks or mold on the inside, indicating age or overexposure,

(TURN TO PAGE 144, PLEASE)



The whole story of the many different services rendered to truck operators by the *Servis Recorder* is told in our illustrated booklet—*"Ten Ways of Getting More Work Out of Motor Trucks."* Write for it—it's free. The Service Recorder Co., 1375 Euclid Ave., Cleveland 15, Ohio.



THIS COMPANY IS PLANNING A LINE OF TRUCKS IN ADDITION TO ITS PASSENGER CARS.

☐ PACKARD ☐ CADILLAC
☐ KAISER-FRASER ☐ BUICK

Answer on P. 144

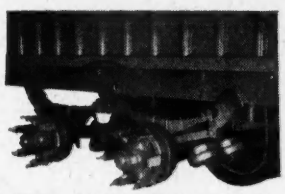


Edwards Economy

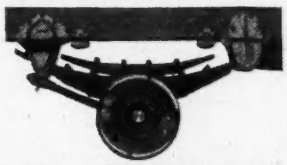
earns more PROFITS for you!

Edwards economy of operation reflects more profits for you. That's a fact, for Edwards Trailers are engineered by men who have years of trailer building experience under their belts. They *see to it* that the best design, *employing tried and proved engineering principles* . . . the finest materials . . . and the most highly skilled workmanship go into every Edwards. The result is . . . a trailer that will stay on the job—on long or short hauls—a trailer that will assure you of many years of highway haulage at low maintenance costs.

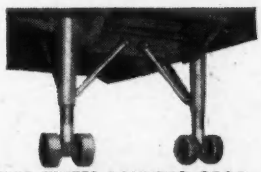
Write today for literature illustrating a variety of models and many outstanding Edwards features.



WHEELS, BRAKE DRUMS, AXLES
Cast steel wheels. Drums that dissipate heat quickly. Timken tubular axles for strength. Timken roller bearings for long life.



BRAKES—RADIUS RODS—SPRINGS
Powerful sure-stop, mountain type brakes. Adjustable radius rods. Trouble-free slip-type springs.



DUAL WHEEL LANDING GEAR
Extra strong, easily operated, and rigidly braced. Worm and gears fully enclosed. Dual wheels on each leg.

EDWARDS



EDWARDS IRON WORKS, INC., SOUTH BEND, INDIANA

Tire Repair

(CONTINUED FROM PAGE 142)

should be given careful inspection and should be discarded as a rule.

DAMAGED INNER PLIES—Tires with badly mutilated inner plies are not good repair material, as this condition is generally caused by running with too low pressure. The casing has possibly been subjected to so much heat that other separation will occur, while the impacts the tire received under this condition have probably broken the cord at other spots.

CORD BREAKS—Tires with extensive cord breaks, such as large X breaks in the crown, diagonal breaks across the tread, crown breaks and large flex breaks cannot be repaired successfully in most cases.

INTERNAL BEAD INJURIES—No internal bead injuries are worth while repairing, according to manufacturers. Even beads that are damaged more than superficially should be carefully considered before being accepted for repair.

BEAD BREAKS—Bead breaks should be considered as unfit for repair, especially if the beads are damaged so badly that the wires project through, are rusted or bent, or the fabric is loosened.

BEAD BREAKS—Tires with breaks extending into the reinforced bead area are not suitable for repair. Cord breaks at this point cannot be salvaged because of the excessive strain imposed by loads.

SHOULDER BREAKS—Circumferential or zig-zag breaks in the shoulder inside the casing render it unfit for repair. Failures of this sort are due to underinflation and overloading, and in many cases fabric separation will accompany this condition, even though not apparent from a quick inspection.

REPAIRABLE INJURIES—It is generally agreed among tiremen that an injury through the cord body of over 2 in. should not be repaired. In fact, many shops prefer that there be no damage to the cords if the tire is to be guaranteed for satisfactory service.

RADIAL CHECKS—Radial checks, if over three in number, and extending through the carcass, should not be repaired.

Selecting Outside Repair Shop

IF THE fleet operator is not set up to do his own tire repairing, he will be wise to check carefully the shop to which he sends his work. Only shops known to be reliable and capable of turning out excellent work should be patronized. The fleetman should be wary of the shop that never rejects a casing.

The fly-by-night shop may be tempted to use low grade rubber and repair materials. They may not take proper care with inspection and repairing of the casing.

(TURN TO PAGE 147, PLEASE)



Buy the
ROD·PAK
5 And 10 POUNDERS



Sold Exclusively thru the Nation's Leading Distributors

Marquette Leads Again! . . . to give you a choice of 17 TYPES of famous Marquette Electrodes in ALL SIZES. Each ROD-PAK contains 5 or 10 pounds of one size and type of electrode. Instantly identified, size and type are clearly printed on both ends of ROD-PAK. Handy to use, handy to stock. Makes it easy to keep a fresh supply of Marquette Electrodes in *all* types and sizes.

Buy the WELD·ALL KIT

12 types of rod in one handy package. Contains the right rod for every welding job . . . each rod a leader in its class. Ideal for all truck and trailer welding jobs, the Marquette Weld-All Kit furnishes a practical supply of rods for fast, low cost repairing of anything that comes along. This generous supply of Marquette Electrodes is an actual $21.90 value.

LOW BARGAIN PRICE . . . $14.95

MARQUETTE
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Automotive
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MARQUETTE MFG. CO. INC.
MINNEAPOLIS 14, MINN.

● WHAT'S COMING?

ANSWER . . . (To Question on P. 142)

Packard, once a major truck producer, has completed the engineering of a line of trucks up to 1½ ton capacity. Another manufacturer planning to enter the truck field is Nash.

(Another Quiz Cartoon is on P. 147)



FEDERALS HAVE WON . . .

By Costing Less to Run!

● For 36 years Federal has been building trucks that have enjoyed an outstanding reputation for ruggedness, dependability, low upkeep cost, long life and bed-rock operating economy. Men in a position to judge—fleet owners, maintenance superintendents, service mechanics, dispatchers and drivers—have learned by keeping comparative cost records, checking lay-up time, servicing and running costs that Federal Trucks have those qualities of endurance, economy and rugged all-truck performance that insure owner satisfaction.

That's why so many truck users now say: "Toss the Tough Jobs to Federal."

FEDERAL MOTOR TRUCK CO. • DETROIT 9, MICHIGAN



FOUR CITATIONS

Federal was cited four times for outstanding achievement in the production of all types of trucks for the Armed Forces.

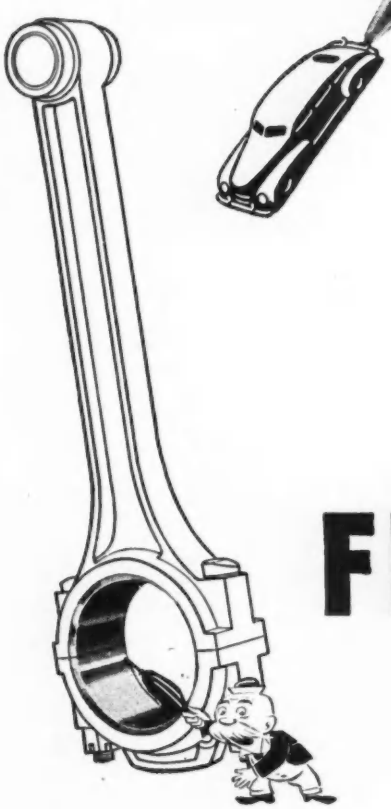


FEDERAL TRUCKS

Since 1910 . . . Known in Every Country—Sold on Every Continent

Performance goes up in smoke...

when worn connecting rod bearings cause oil pumping



Heavy exhaust smoke behind means engine trouble ahead! It's a sign that worn engine bearings are letting excess oil carbon-foul pistons, rings, valves and spark plugs, causing sluggish operation, stealing pep and pick-up. Badly worn bearings can cause costly crankshaft damage, too! Restore power, pep, economy—replace with Federal-Mogul Oil-Control Bearings. They are engineered for the job!

FEDERAL-MOGUL SERVICE, COLDWATER, MICHIGAN
DIVISION OF FEDERAL-MOGUL CORPORATION

Replace in Sets with Genuine

FEDERAL-MOGUL

Oil-Control Bearings



Tire Repair

(CONTINUED FROM PAGE 144)

Many shops cheapen their work in order to quote a low price. They may not apply sufficient rubber, or they may not take the time to dry the carcass properly. Each step in the operations of rebuilding the tire and applying the curing materials should be done according to factory specifications. Poorly trained or irresponsible personnel may resort to short cuts which will cut mileages appreciably.

A quality repair shop will give a guarantee in writing if requested. This guarantee, based upon experience with the fleet's type of operation, is the best assurance of a satisfactory job. The good repair shop will have modern equipment, use only the highest quality materials and employ competent, trained personnel. Major requirements for a properly equipped shop for rebuilding or recapping might include:

1. Undercover storage for all tires.
2. Good buffing equipment for removing the tread uniformly and without burning the tire surface.
3. Facilities for handling dust from the buffing operation.
4. A clean and warm place in which to dry the cemented casings before application of the new tread rubber.
5. Equipment for balancing the tire after it is recapped.
6. Modern curing molds which will provide for proper tread widths and outside diameters consistent with requirements for good mileages.
7. Equipment to take care of all types and sizes of tires used by the operator.
8. Trained, dependable personnel.
9. A price list high enough to enable them to do the best work.
10. Modern equipment using the newest methods developed for tire selection, repair and treading.

Improving Tire Mileage

MODERN driving conditions, loads and speeds require careful use of the right tire and type of tread for individual fleet operations. Accordingly, the tire dealer or the repair shop should provide a tire engineer as a service to the fleet operator. He should be able to advise on repair advisability and anticipate any unusual situations that might be encountered.

(TURN TO NEXT PAGE, PLEASE)

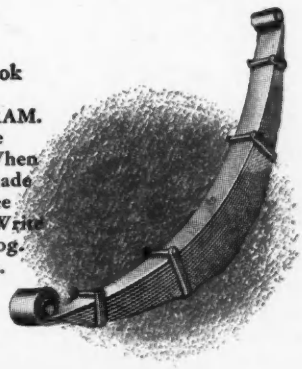


Answer on P. 148



In the crystal ball . . . I SEE SPRINGS! *You,* too, can look into the future and be a real *prophet of profits,* by using MAREMONT'S NEW SPRING INSPECTION PROGRAM. You can detect and replace overworked springs long before they fail, reducing maintenance costs, increasing profits. When replacing, insist on genuine MAREMONT SPRINGS, made of alloy steel. They cost no more than ordinary springs. See your MAREMONT Distributor or Spring Service Station. Write for MAREMONT'S free inspection chart and latest catalog. Remember, MAREMONT Springs won't let you down.

Also Manufacturers of Maremont Mufflers and Pipes



SINCE 1877 MAREMONT SPRINGS

MAREMONT AUTOMOTIVE PRODUCTS, Inc.
1800 S. Ashland Ave. Chicago 8, Ill.
Factories at Chicago, Cicero and Harvey, Ill.

Tire Repair

(CONTINUED FROM PAGE 147)

The fleet operator himself can do much to increase the mileage of the repaired tires by intelligent and careful use of a reclaimed casing. It must be recognized that a repaired tire cannot possibly give the service the tire did when new, and most failures are a result of a lack of appreciation of the limitations of a repaired casing.

First, repaired tires should be mounted where they encounter the least amount of strain. In most cases this would be the outside dual of the trailer. Many operators consider it unsafe to use a repaired tire on a front wheel, and the added stress of pulling would eliminate its satisfactory use on the rear truck wheels.

Second, it is recommended by many companies that repaired tires be held for use during the winter months, as tires with sectional repairs can be used with entire satisfaction on certain runs in cold weather, where they would fail during hot summer months.

Third, repaired tires should be used principally on short runs and low speeds, such as city operation or in terminal duty. In many cases such tires would give entirely satisfactory service, but the chance of road failure, the safety factor and the time element would make it more practical to pamper repaired casings in such a manner.

Fourth, repaired tires should be inspected often, pressures kept at the correct amount and minor repairs taken care of immediately. If used on dual assemblies, they should be properly mated to insure equal load distribution. Even brake drum heat due to excessive braking is a factor to consider in the life expectancy of a renewed tire.

Setting Up a Tire Shop

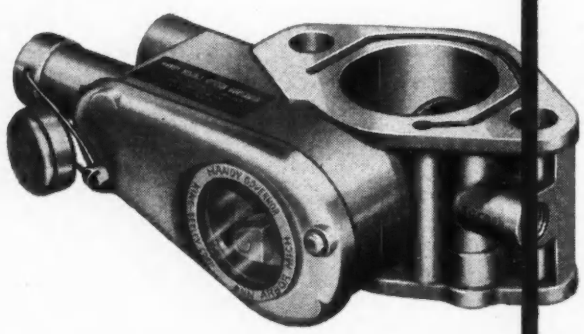
IN SETTING up a tire repair shop within the fleet, many problems will arise which require special study and research on the part of the fleet operator.

After the operator has decided that the volume of his tire repair work will justify installation of repair equipment, he will need to study costs, equipment selection and shop layout.

In making preparations to provide tire repair, one of the first problems is that of determining what mold equipment is necessary. Solution to the problem should be based upon the following factors: 1. Amount of capital the fleet has available for this project, 2. space available, 3. sizes of tires to be repaired, and 4. preference between electricity and steam for heat. Both tire and equipment manufacturers will make available, upon request, valuable information to assist the fleetman in selecting the best equipment adapted to his needs.

In addition, suggested floor plan layouts and details for equipment re-

(TURN TO PAGE 150, PLEASE)



This GOVERNOR

HELPS KEEP the Emotional Driver OUT OF TROUBLE

Anger, fatigue, grief, or joy—any one of these can temporarily transform a reasonably good truck driver into a serious traffic menace. This very thing has happened too often to ignore the danger of these human reactions.

The Handy Vari-Speed Governor, however, is not human, is never emotionally involved, but always comes to the assistance of the human driver who is. When your truck fleet is equipped with the Handy Governor, you have good reason to expect fewer accidents, and you will also save on tires, engine repairs, lubrication and brake maintenance.

The Handy Governor costs but a small fraction of what it will save you in its first year of operation.



KING-SEELEY CORPORATION
ANN ARBOR MICHIGAN

PLANTS IN ANN ARBOR · GRAND RAPIDS · YPSILANTI

● HOW BIG?

ANSWER . . . (To Question on P. 147)

A micron is the thousandth part of a meter or roughly 1/40,000 of an inch.

(Another Cartoon Quiz is on P. 150)



Make cars run better

and keep them running better

...the guaranteed way!

● You can really *feel* the new power in a car after a Casite tune-up . . . new smoothness, too . . . and the thrill of a motor that's rarin' to go.

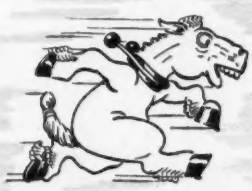
● Casite retards formation of sludge and gum . . . cuts down engine wear . . . cleans motors and keeps them clean. Remind your customers to use Casite regularly—a pint through the air intake every three months and a pint in the crankcase every oil change.

● Casite's famous guarantee of "Better and Smoother Performance or Double-Your-Money-Back" speeds your sales . . . helps you make more profits. While you put in gas or oil let customers read one of the guarantee certificates packed in every case of pints. You'll double your Casite business.

THE CASITE CORPORATION • HASTINGS, MICHIGAN

Listen to
"I DEAL IN CRIME" • Saturday night 8:30 EST • ABC





CLEANS MOTORS
KEEPS MOTORS CLEAN

Tire Repair

(CONTINUED FROM PAGE 148)

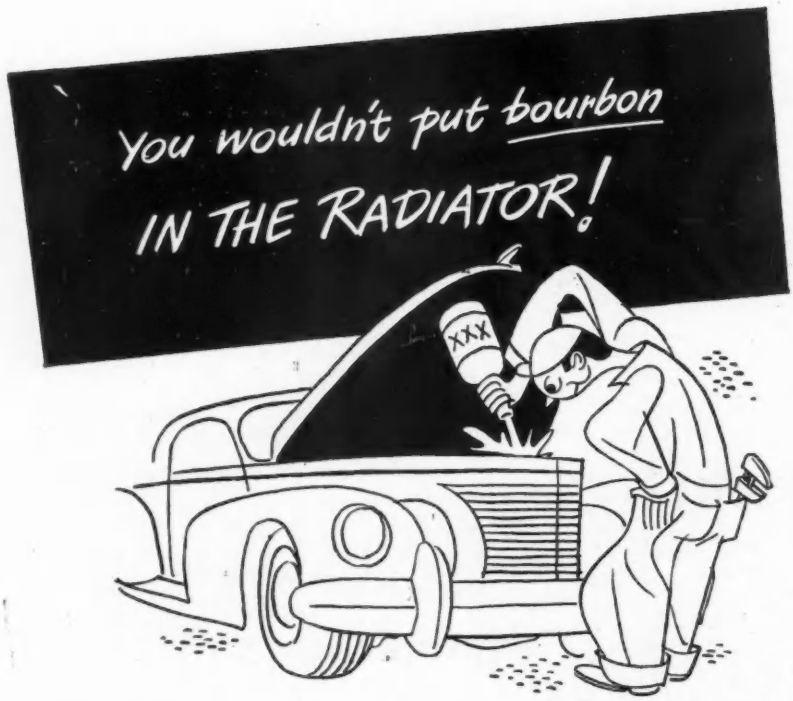
quirements for specific fleet requirements can be procured from these manufacturers. Included below are recommendations for basic equipment consistent with adequate repairs in the average truck fleet:

1. Sharpening stone.
2. Snipe nose pliers.
3. 3-in. vulcanized in rubber brush.
4. 3-qt. bench can.
5. Smooth ball bearing roller.
6. Corrugated stitcher.
7. Valve stem rethreader.
8. 10-in. tire probe.
9. An awl for pricking.
10. Flexible knife—4 x 1 in.
11. 4 x 1 in. square-point knife.
12. 10-in. rubber shears.
13. 4 x 1 in. tapered knife.
14. Valve stem bas nut wrench.
15. 6-in. pliers.
16. Tire spreader, pneumatic, hydraulic or hand-operated.
17. Spot press with sidewall contour block.
18. Sectional mold with a variety of plates and shells.
19. Sectional air bags or combination steam air bags.
20. Flexible shaft buffer and rasp.
21. An adequate tire rack.
22. A rebuilding bench.
23. A paint and trim table.
24. Tire and wheel dolly.
25. Tire brander.

The Recapping Shop

IF THE operation will support a complete tire repair and rebuilding department, planning and equipment selection should consider the following points: Since inspection is one of the most important operations in the recapping procedure, systematic set-up of equipment and excellent lighting should be of prime consideration. In recapping, a large recap type buffer and dust collector are needed. There is now available a vacuum cleaner type bag which will eliminate much of the dirt and dust accumulating with the stripping and buffing operations. A good work bench, hand tools and a tread roller are needed for building in repairs, cementing and applying treads for recaps, after buffing. Racks should be employed for hanging up the cemented tires after this operation. Unless dust conditions are extreme, it is suggested that cemented tires be dried in the open, rather than in a

(TURN TO PAGE 152, PLEASE)



There is no substitute for genuine Bendix Drive Parts

You wouldn't waste any "corn squeezins" using it for antifreeze. But there is another type of shortsightedness that can have serious consequence—the use of other than genuine parts for repairs.

Your customers count on *you* for reliable service and repairs. *You* can count on Genuine Bendix* Drive Parts to give the same complete and unfailing customer satisfaction as the original Bendix Drive.

For Bendix Drives have a nation-wide reputation and are performance proven over the years by more than sixty-five million installations.

Don't take a chance on losing valuable service business just to save a few pennies—be sure to specify Genuine Bendix Drive Parts the next time you order from your distributor.

*REG. U. S. PAT OFF



"Look for the blue and white box"

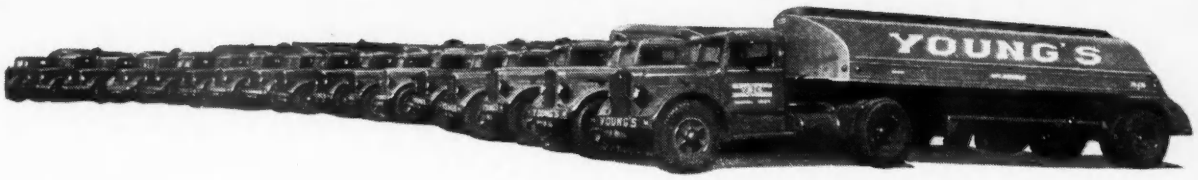
Bendix Drive

ECLIPSE MACHINE DIVISION of Bendix AVIATION CORPORATION

ELMIRA • NEW YORK

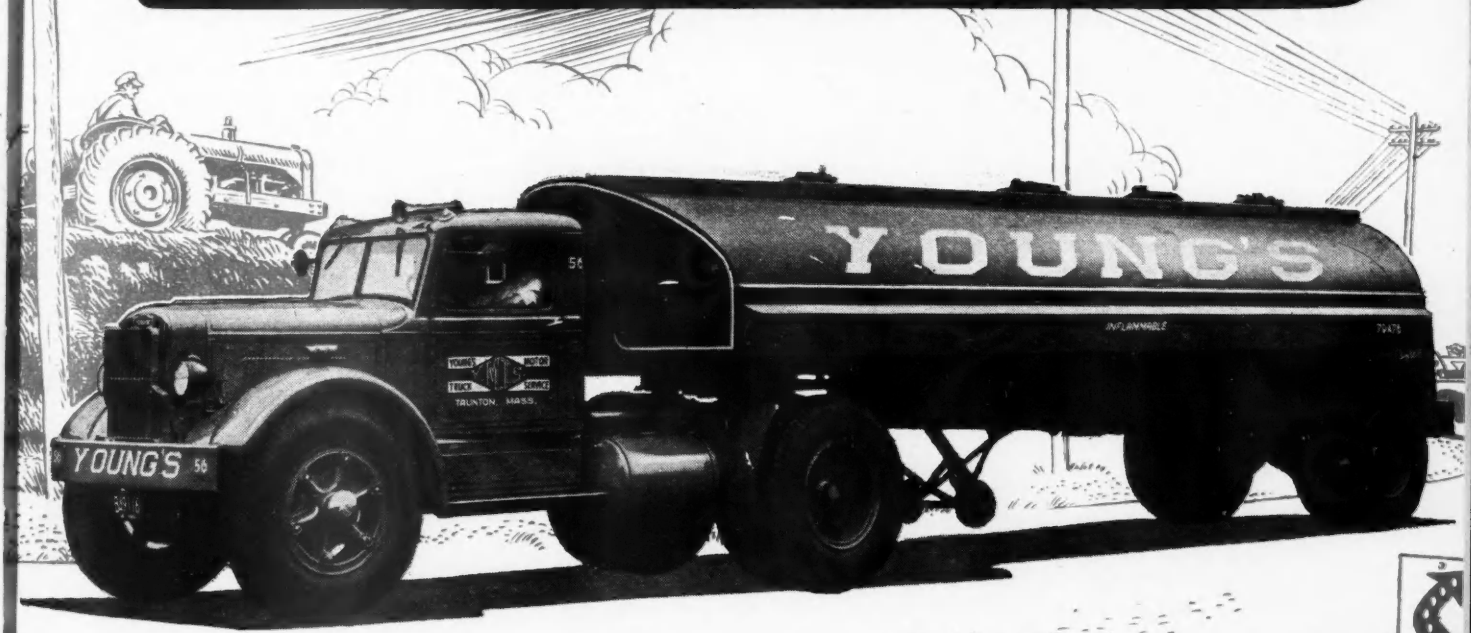


Answer on P. 152



YOUNG'S 21 TRACTORS ARE ALL AUTOCARS

Operating out of Taunton, Massachusetts, Young's Motor Truck Service covers Massachusetts, Rhode Island, and most of Connecticut with a fleet of 21 heavy-duty Autocar Tractors hauling fuel oil, gasoline, and road oils in semi-trailer tanks of from 3,000 to 5,000 gallons capacity. Autocars are the ideal choice for this operation because they are solidly and soundly built, and are backed by a service organization unsurpassed in the motor truck industry.



AUTOCAR TRUCKS

They Cost Less, Because They Do More Work

Manufactured in Ardmore, Pa. • Factory Branches and Distributors from Coast to Coast

Tire Repair

(CONTINUED FROM PAGE 150)

drying closet, conserving cost and space.

Matrix racks should be used to protect matrices when not in use. This will also help to keep the shop in order. If a complete room is not designated for the build-up operation, the equipment should at least be grouped together for continuous production flow and a minimum of handling. All material should be stored in a clean, orderly condition and in a convenient location—all factors contributing to an efficient, compact shop layout.

The entire shop should be well lighted and well ventilated if the best work from the men is expected. The quality of the work is directly proportional to the cleanliness and efficiency of the shop. A dark, dirtv and congested shop does not encourage good repair work.

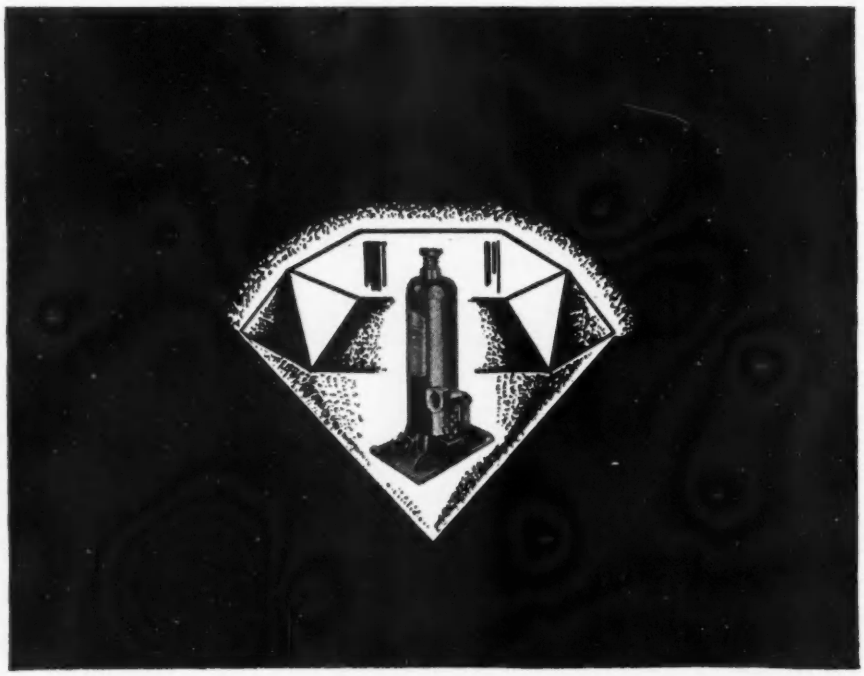
Carefully planning the layout of the operation can contribute to good shopkeeping. The service department, the buffing operations and the inspection department create more dust and dirt than others, so they should be separated from the others and cleaned more frequently. This plan will also aid in the fire prevention program of the operation. Wherever possible, the cementing, drying and building departments should be segregated or be in separate rooms.

Arrangement of the equipment is also important to good shopkeeping. The tools and equipment in each department should be arranged keeping in mind the servicing and cleaning of the areas. Curing bags, tubes, matrices and rims should have their proper racks. Racks and cabinets for each piece of equipment will aid in this program.

Tire specialists should be trained or selected from top-notch men, as precision and care is very important in securing a satisfactory work. Personnel should be taught the correct care and use of equipment at their disposal. It is imperative that the tire department keep abreast of the times as new developments and repair methods are being brought out currently and will aid them in attaining even better repaired tire mileages. With rayon cord tires, the new nylon tire and with many other advancements in the offing, repair techniques will be continually changing. The fleetman should not overlook the service offered by tire manufacturers in providing tire technicians' training courses presenting expert advice on tire retreading and repairing practices. Courses are given throughout the country and in most cases are free, so that the best tire repair information is available for the taking.

END

(Please resume your reading on P. 62)



LIKE A DIAMOND IN QUALITY

The Joyce Liftmaster Nu-Hydro Hand Hydraulic Jack

DROP FORGED BASE—Strength; durability; no leakage through porous castings. Always ready for use.

PUMP PISTON of TOOL STEEL—Hardened and ground to mirror-like finish. Only finest quality packing used.

BRONZE GUIDE BEARING—Extra long for smooth, rigid, long-wearing operation. Every part precision built.

FORGED RAM CAP—Maximum load contact and safety against slippage. Long lift from low height.

SAFE AGAINST OVERLOAD—By-pass prevents damage from overloading. Durability maximum; maintenance nil.

STREAMLINED DESIGN—Simplified mechanism; no cotter keys at all.

SIX MODELS—3 tons to 30 tons. A size for every purpose.

Send for Bulletin 190-J giving complete specifications of this ultra-modern Jack.



- SINGLE-POST AUTO LIFTS
- LIFTMASTER HYDRAULIC JACKS
- SHOPMASTER 2-POST LIFT
- "FREE WHEELER" LUBE JACKS
- BUS & TRUCK 2-POST LIFTS
- HOLD-A-CAR CHASSIS STANDS

THE JOYCE-CRIDLAND CO. • DAYTON 3, OHIO

● WHEN IS IT?

ANSWER . . . (To Question on P. 150)

Clear. Although many minor accidents occur during rain, snow or fog, the vehicles are traveling at a slower speed and fatal accidents are not as many as you might think.

(Another Cartoon Quiz is on P. 154)

Extra Payload = Extra Profit



KRIEGER ALL-STEEL Custom Styled Van

ALLOWS AT LEAST 20%-30% LARGER LOADS!

10 All Star Features

- ★ Strength of All Steel Construction
- ★ Simplicity of interlocking sections
- ★ Beauty and Durability of Custom-Built Bodies
- ★ High Tensile Steel for Strength, Light Weight
- ★ Allows 20% to 30% Extra Payload
- ★ All Steel Top
- ★ Eases Maintenance
- ★ Damaged Sections Quickly Replaceable
- ★ Cuts Repair Costs and Layovers
- ★ Available in Various Body Lengths

Look: you're in the trucking business for *profit* . . . so it's only common sense to choose the vans that make the *most profit* for you. Through the use of extra-light, extra-strong high tensile steels, the Krieger Custom Styled Van not only assures you of *extra* earnings through extra-large payloads . . . but also *keeps your maintenance costs down in the face of rising operating costs!* It will *pay* you . . . and pay you *well* . . . to investigate these revolutionary truck bodies.

Sold only through franchised dealers. Excellent sales-producing cooperative promotion material available. Limited number of new franchises still open. Wire, write, phone for details.

Krieger All-Steel Custom Styled Vans Are the Exclusive Creation of

KRIEGER STEEL SECTIONS, Inc. 11-11 34th AVENUE LONG ISLAND CITY, N.Y.

Col. Maidel Tells SAE Precision Adjustments Eliminate Many Common Engine Troubles

ENGINE trouble shooting is a negative approach to the problem of improving operating efficiency, said Col. Mark Maidel, Vice President—Operations, the Scandinavian Airlines System, at the S.A.E. Panel Meeting Discussion in New York. Proper maintenance, periodical checks and precision adjustments will eliminate the need for running down engine troubles *after* they occur, he declared.

Colonel Maidel, long associated with maintenance problems through his 20 years of Army work and in civilian life, presented this new slant on engine maintenance to a group of nearly 100 S.A.E. members attending the March 13 meeting.

Aircraft engines require scientific adjustments, he declared, and improved performance with comparatively trouble-free operation results from a perfectly adjusted engine. One of the biggest factors in a scientific approach to the problem is holding adjustments to zero tolerances. Manufacturers, he said, allow certain tolerances in nearly any adjustment data, but the accumulative error which is always present even with precision instruments will result in maladjustments and rough engines. His own experiences with Army plane operation, he stated, proved that holding adjustments to zero tolerances paid off in increased engine efficiency and reduced trouble shooting intervals. If that is true for aircraft engines, it can well be applied to the automotive field.

Col. Maidel clinched this remark with an example in point. On a particular airplane, he had experimented with more precision adjustments of the valves through the air-protractor method. The engine was tuned to precision standards and tests were made to determine improved operation. This plane operated a total of 200 hours—without further adjustments and fuel utilization was improved to a great extent.

All this proved to his personnel that each adjustment is directly dependent upon another and that accu-

(TURN TO PAGE 158, PLEASE)

DO ALL TUBE REPAIRING

Easier • Faster Better • with DILLECTRIC



• Many a tube repair method that was "good enough" a few years ago is totally inadequate for the job it must do today. That's why over 75,000 service stations have switched to Dillectric. Dillectric is the simplest, fastest, best way to repair any tube. Convenient-to-use, electrically heated patch units and valve stem units, with automatic time and heat control, assure a perfect repair every time. There's no guesswork — no uncertainty. Anyone can do a guaranteed job in a "jiffy" with Dillectric. Use this modern "stand-out" service to save your time, build your business, increase your profit. No other tube repair service provides so many advantages. Mail a postal card, today, for full information.

THE DILL MANUFACTURING CO.
700 East 82nd St., CLEVELAND 8, OHIO
Branch — 1011 S. Flower St., Los Angeles 15, Calif.

- STRONGER REPAIRS — Fills, reinforces, vulcanizes the tube injury completely safe. No failures in service.
- NEATER REPAIRS — A smooth, feather-edge repair.
- NO FIRE HAZARD — Safe. Carries the seal of approval of the Underwriters Laboratories.
- NO SMOKE OR FUMES — Clean electrical operation.
- AUTOMATIC — Automatic shut-off controls time and temperature of vulcanization. No guessing.
- HANDY — Patch and Valve Stem Units come ready-prepared. No waste — easy to inventory.
- FASTER — Completes repair in quickest possible time for perfect vulcanization.
- COMPLETE — Handles all types of repairs in all tubes — synthetic or natural rubber.
- LOW-COST REPAIRS — Dillectric Patch Units cost less than 4c each.
- ATTRACTS CUSTOMERS — Car owners know electric vulcanizing is best—are impressed with Dillectric.
- USED BY OVER 75,000 STATIONS — No. 1 in tube repair service.
- RECOMMENDED — and approved by all leading tire and oil companies.

ONLY $6.25 Complete



DILLECTRIC
REG. U.S. PAT. OFF.
Electrically VULCANIZED TUBE REPAIRS

TOPS FOR SERVICE
TOPS FOR PROFIT

TRUE OR FALSE ?

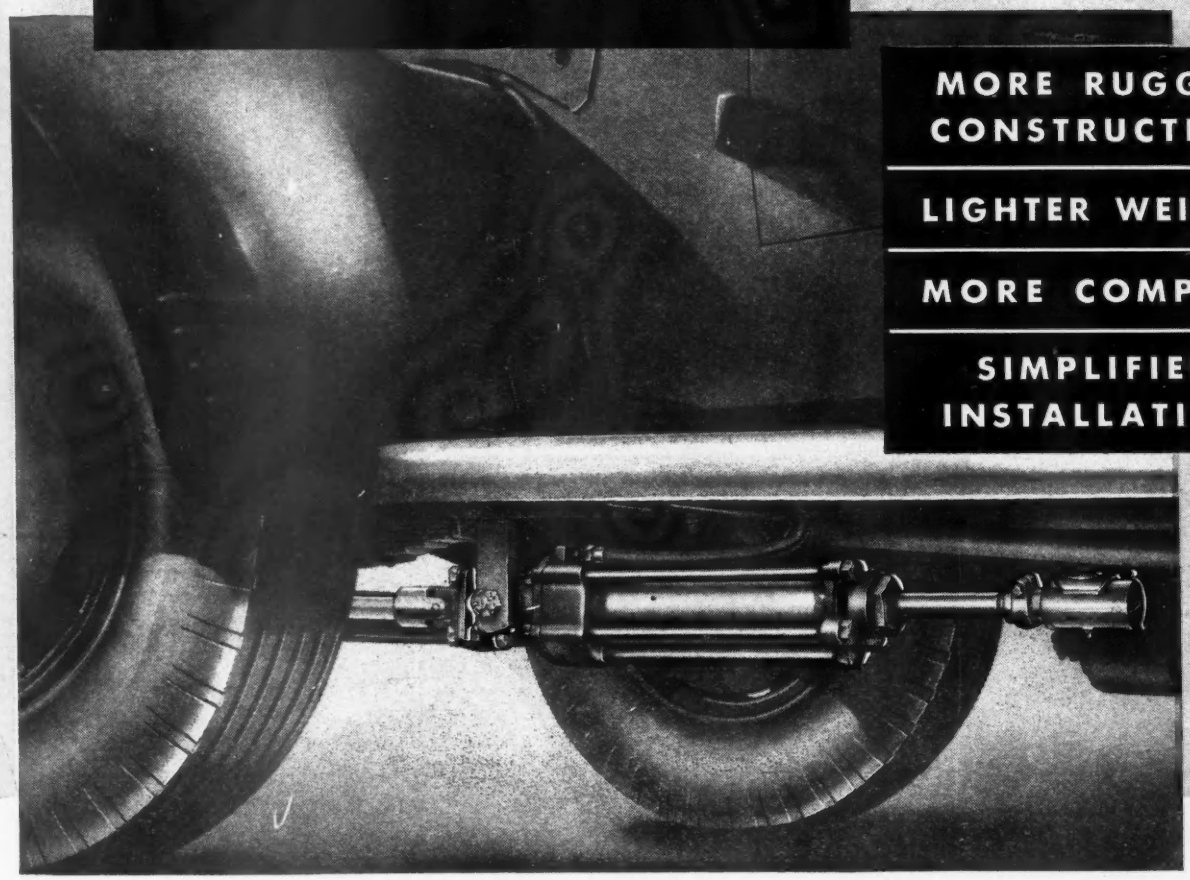


GENERAL MOTORS HAS MORE STOCKHOLDERS THAN EMPLOYES.

☐ TRUE ☐ FALSE

Answer on P. 158

THE REDESIGNED VICKERS *Hydraulic* POWER STEERING BOOSTER



MORE RUGGED CONSTRUCTION

LIGHTER WEIGHT

MORE COMPACT

SIMPLIFIED INSTALLATION

Added to the advantages always inherent in Vickers Hydraulic Power Steering are now lower price, a substantial saving in weight, more rugged and compact construction and an integral (instead of a separate) relief valve that greatly simplifies installation. More than a year's testing on city buses and heavy trucks under the most severe operating conditions has proved the redesigned Vickers Hydraulic Power Steering Booster (original design has been in use for 16 years).

The steering effort required can easily be supplied by your little finger . . . steering load is carried by the hydraulic cylinder . . . road shocks are not transmitted to the steering wheel . . . automatic protection against abuse . . . see new Bulletin 47-30 for all the facts about Vickers Hydraulic Power Steering System.

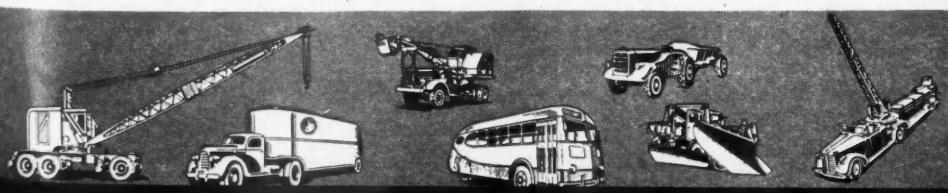
VICKERS Incorporated • 1418 OAKMAN BLVD. • DETROIT 32, MICHIGAN

Application Engineering Offices: • ATLANTA • CHICAGO • CINCINNATI • CLEVELAND • DETROIT • LOS ANGELES • NEWARK PHILADELPHIA • ROCHESTER • ROCKFORD • SEATTLE • TULSA • WORCESTER

ENGINEERS AND BUILDERS OF OIL HYDRAULIC EQUIPMENT SINCE 1921

***Write for* NEW BULLETIN 47-30**

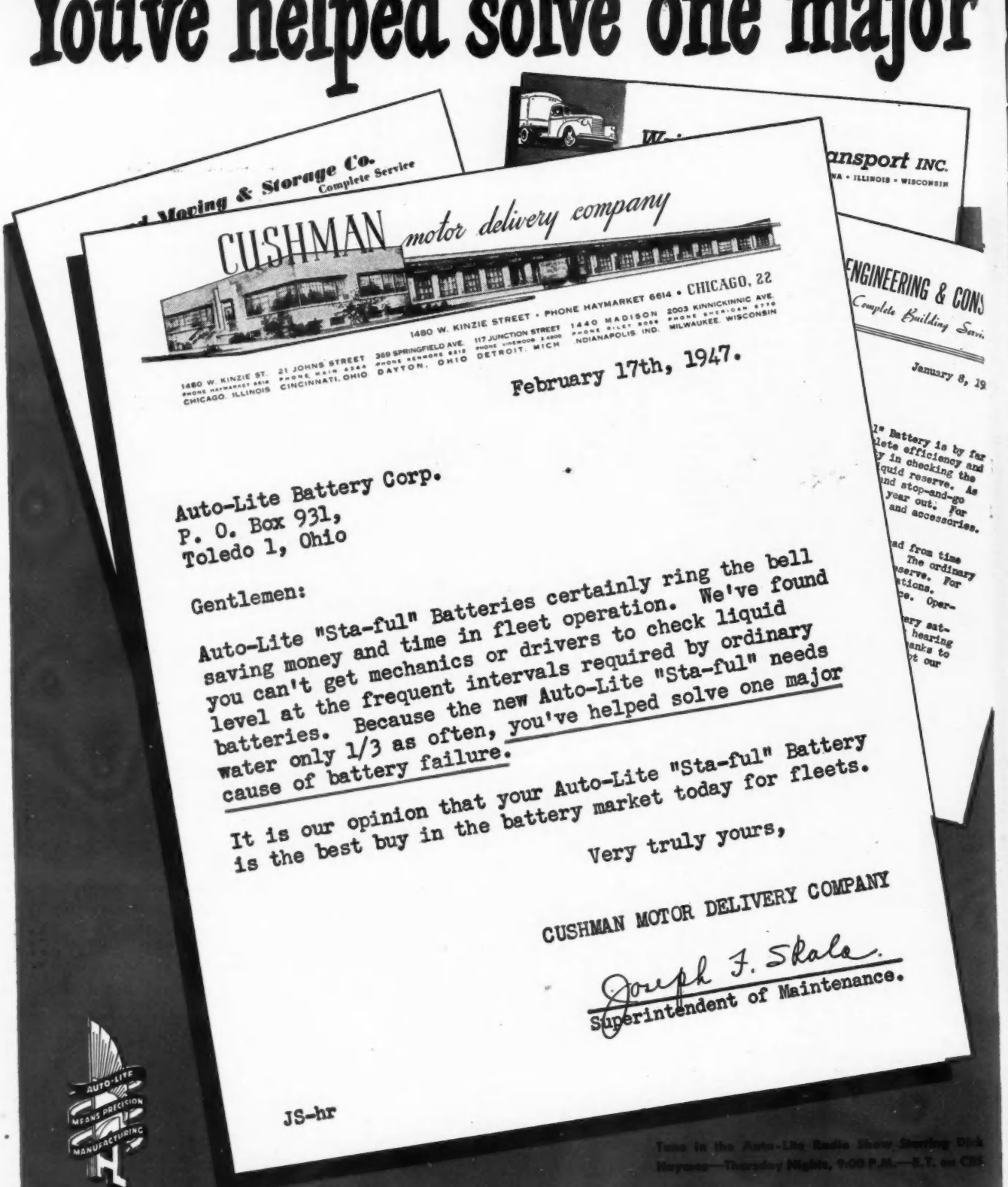
Illustrating and describing the Redesigned Vickers Hydraulic Power Steering System.



Representative Applications of VICKERS *Hydraulic* POWER STEERING

3082

"You've helped solve one major



cause of battery failure ..."

SAY FLEET OWNERS COAST-TO-COAST



New Battery

needs water only 1/3 as often

Sta-ful Batteries

MONEY CANNOT BUY A BETTER BATTERY

Precision Adjustments

(CONTINUED FROM PAGE 154)

rate control of all factors will insure improved operation and eliminate many trouble shooting services.

Colonel Maidel emphasized that as much as 25 per cent of engine troubles can be detected by visual inspection. Loose wires, leaking wires, defective electrical units many times show external evidence of defects. Again, engine troubles can be detected by ear. For instance, defective exhaust valves can be detected by a noise or a hiss at the exhaust pipe. Leaking intake valves can be found by listening at the intake manifold, and blowby can be located by checking the hiss at the crankcase breather. Engine vibration also is a good sign of maladjustments and improper operation, he said.

An important point brought out was the fact that most aircraft engines have a critical r.p.m. point, that is one particular speed range may produce a failure not noticeable at another r.p.m. He suggested that engines be checked for operating efficiency at various speed ranges—at the lowest manifold pressure, at a fast idle and at normal operating speed. The vehicle mechanic might apply this procedure to the checks of his truck.

A rich idle mixture is one of the greatest enemies of the combustion engine, the speaker declared. When fuel is not burned effectively in the cylinder, the spark plugs become fouled, and the carbon build-up in turn causes improper firing of the mixture in the cylinder. The carbon insulation reduces heat dissipation and results in burning of the exhaust valves.

Backfiring, caused by too rich or too lean an air-fuel mixture, improper timing or poor compression, is another factor with which the mechanic should be deeply concerned. This condition, at least in the aircraft engine, will change the air-fuel ratio, cause induction leaks and will damage the internal parts in an engine. The Colonel's answer to these problems was careful and systematic inspection and adjustment of valves carburetors and timing. He suggested that once an idle mixture is set, only a temperature change should make readjustment necessary.

Defective instruments are responsible for a great many improper engine adjustments, Col. Maidel declared. He emphasized the fact that instruments of different makes sometimes vary in sensitivity and accuracy and warned that only reputable precision instruments be used for engine tune up. Along this line he criticized the use of a regular vacuum gage for checking cylinder compression—because the variation in engine turning will sometimes affect the compression reading. He compared the use of a compression gage by a poorly trained mechanic to the practice of inserting

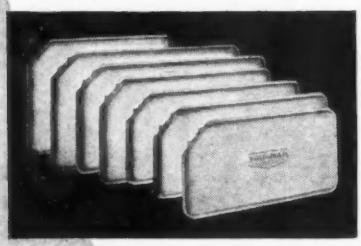
(TURN TO PAGE 160, PLEASE)

PROTECT YOUR MERCHANDISE WITH PRACTICAL REFRIGERATION



KOLD-HOLD

Preserve the true flavor and high quality of your product by delivering frosted foods and other perishable items as fresh and attractive as when packaged. KOLD-HOLD Streamlined "Hold-Over" truck plates protect your product in transit . . . enable you to make more deliveries with less waste and spoilage . . . keep the interior of your truck dry and odorless.



These plates are engineered and constructed to give complete satisfaction and efficient service . . . guaranteed ten years.
Free estimate of your requirements upon request.

KOLD-HOLD MANUFACTURING CO.
620 E. Hazel Street
LANSING 4, MICHIGAN

● TRUE OR FALSE?

ANSWER . . . (To Question on P. 154)

True. As of mid-year, General Motors had 425,657 stockholders against 345,940 employees.

(Another Quiz Cartoon is on P. 160)



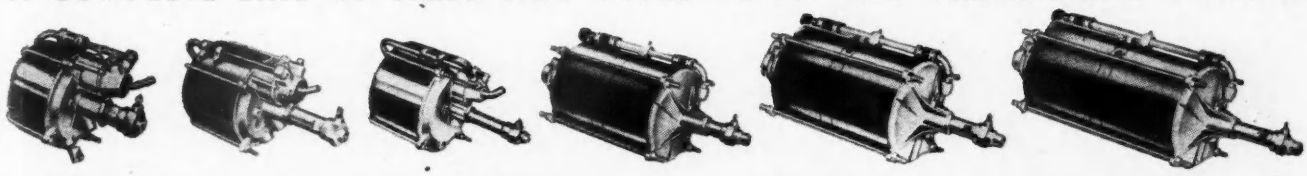
1st in power braking

When you specify Hydrovac* for power braking, your choice is confirmed by the judgment of leading truck manufacturers. With over one and one-half million units built and performance proved by billions of miles of service, Hydrovac is today's first choice for original factory equipment on the new truck and tractor models. Hydrovac consists of one compact, sealed unit, and can be installed anywhere on the chassis with a minimum of changes in the original hydraulic brake connections. Utilizing engine manifold vacuum, it adds smoothly controlled hydraulic braking power to the slightest foot-pedal pressure.

For your power braking needs, investigate Hydrovac—find out for yourself why manufacturers, dealers and drivers agree it is 1st in *Power Braking*. *REG. U.S. PAT. OFF.

HYDROVAC—Hydraulic-Vacuum Power Braking Unit

A COMPLETE LINE OF SIZES AND TYPES TO FIT ALL COMMERCIAL VEHICLES



BENDIX PRODUCTS DIVISION of Bendix AVIATION CORPORATION

SOUTH BEND 20, INDIANA

Precision Adjustments

(CONTINUED FROM PAGE 158)

corks into the plug holes and seeing how far they would blow upon cranking the engine. He suggested reliable, precision instruments used by competent mechanics as an answer to this problem.

The speaker did not approve of the use of a lamp to set distributor points. Inaccurate adjustment results, he said, because the mechanic will invariably turn the adjustment past the point where the light goes out, and cannot determine exactly where the proper position should be. A small error in distributor point synchronization will cause rough engines and poor efficiency.

While Col. Maidel concerned himself primarily with factors affecting a well-balanced aircraft engine in his discussion, he insinuated that many of the theories can be ideally applied to automotive engines. If modern checking techniques utilizing present aircraft instruments have resulted in such improved operating efficiency with a decided cut in engine troubles, then these practices can well be applied to the truck fleet field. Airplane engines are not allowed to fail, and if the truck mechanic will adopt that attitude and apply scientific checking methods to vehicle maintenance, improved operation will certainly reward him.



"Good Companions, Joe . . . Always Keep 'em with You . . . They Cut Down Operating Costs"

If tire failures due to underinflation are taking chunks out of your profits, put the famous Schrader "Seals" (the Schrader Core and Cap) and a Schrader Tire Gauge to work for you to stop this costly waste.

Check all your tires, including spares, with a Schrader Gauge for dependable, accurate readings. Install new Schrader Valve Cores if necessary; they check the air in the valve. And seal the valve mouths with air-tight Caps, for only with Schrader Sealing Caps do you get 100% air-tight sealing efficiency, not only at 30 lbs., not only at 100 lbs., but up to 250 lbs. pressure, when the Caps are put on finger-tight.

Order from your regular supplier today

Schrader PRODUCTS CONTROL THE AIR



SCHRADER CAPS AND CORES Make Tires Last Longer!

A. SCHRADER'S SON, Division of Scovill Manufacturing Company, Incorporated, BROOKLYN 17, N.Y.

Originators of the Comparative Air Loss System • Watch your Pressures, Keep a Schrader Tire Gauge in Every Vehicle

JANUARY TRUCK LOADINGS UP SLIGHTLY OVER DECEMBER

The volume of freight transported by motor carriers in January increased 0.3 per cent over December and 19.5 per cent over January of last year, according to statistics compiled by the Department of Research of American Trucking Associations, Inc.

Comparable reports received by ATA from 248 carriers in 39 states showed these carriers transported an aggregate of 2,280,244 tons in January, as against 2,272,691 tons in December and 1,908,325 tons in January, 1946.

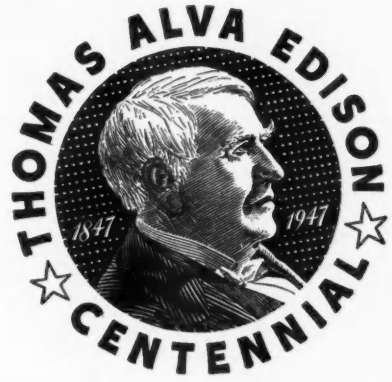
The ATA index figure, computed on the basis of the average monthly tonnage of the reporting carriers for the three-year period of 1938-1940 as representing 100, was 196.3.

Approximately 83 per cent of all tonnage transported in the month was hauled by carriers of general freight. The volume in this category decreased 0.4 per cent below December, but increased 18.8 per cent over January, 1946.

Transportation of petroleum products, accounting for about 9 per cent of the total tonnage reported, showed an increase of 8.2 per cent over December and 21.0 per cent over January, 1946.



Answer on P. 162



"ALL MUST WORK . . . WITH HEAD OR HAND"

One of the commonest misconceptions is that persons with genius or great skill need not work for success. Nothing could be farther from the truth.

To a man who thought that a genius worked only when the spirit moved him, Edison made this significant remark: "Genius is 2% inspiration and 98% perspiration."

Hard work may not be the panacea for all our ills, but surely the standard of living we all enjoy in America was not attained by men who hated work. Our prosperity as a people, our success as a nation, were made of the sweat of Thomas Edison and men like him. In the last analysis, our well-being depends on the amount of work we are willing to do to attain it.



You can always rely on an

EDISON

700 NTA Way-Stations Provide Systematic Contact with Drivers

The red, white, and blue sign of the National Trucking Association made its debut on the nation's highways during the fall of 1946. The spring quarter of 1947 will see the insignia in full bloom from coast to coast and from Mexico to Canada. Fleet operators in every state are availing themselves of the free services offered.

National Trucking Association was inporated in Wichita, Kan., as a result of a study made of the losses that 23 trucking organizations incurred annually because of inability to keep proper liaison with the units of their fleets on irregular runs. Information compiled indicated that a tremendous annual economic loss was directly traceable to this factor. National Trucking Association was organized, therefore, primarily to eliminate the gamble involved in irregular and distant hauls.

Gratis membership in National Trucking Association has already been granted to more than 4000 trucking concerns in the United States.

Usually requests for membership are the result of truck drivers' reports of encounters with National Trucking Association's way-stations on the highways. The association has franchised strategically located garages or service establishments on every major artery of the nation as way-stations. These establishments, inspected by a Nation Trucking Association representative, agree to maintain a telephone for member use. A call-board is installed in the way-station and the proprietor is charged with the responsibility of charting incoming calls from fleet operators to their in-bound truck drivers. In addition, the proprietor of the way-station keeps on the call board a list of available sleeping rooms, all night restaurants, etc. Briefly, the proprietor contracts to be responsible for the well-being of the trucker while in the vicinity of his establishment. Before granting franchise, National Trucking Association representatives check the prospective way-station as to convenience of locality and facilities offered as well as to business and personal integrity of the management. The holder of the way-station franchise must be able to accommodate truckers on those various but all important queries such as "Who is the Doc?" "Where is a dentist?" "Where is the law in this town?" "Where can I park?" etc.

The value of the franchise to a properly operated way-station is obvious. Trucks patronage means success. The operator of a fleet, on the other hand, has at his finger tips a network of contact stations where he can reach his drivers at any time, day or night.

By prior agreement, a driver can check in for calls at way-stations all along his route. Matters involving a rerouting, a pick-up, a recall, or the transmission of a personal message from the drivers' family can be expedited by the use of the way-station check-in-system. These advantages are his free of charge.

All trucker-members of the association carry membership cards, and way-stations prominently display the large metal sign of the association. Way-stations numbering more than 700 are already servicing truck traffic, with further expansion planned.

Truckers desiring association membership, and prospective way-stations requesting franchise are invited to contact National Trucking Association headquarters, 1411 Union National Bank Building, Wichita, Kansas, for information. A complete gazette of way-stations will be forwarded to all trucking firms having membership during the month of May.

IT TAKES A
FOREST of FASTENERS



Automotive men know that it pays to use only the highest quality cylinder head studs in assembling internal combustion engines. That's why so many cars come off the assembly lines originally equipped with Lamson & Sessions milled studs.

On motor re-building jobs, too, its smart to use Lamson studs—for they are precision made with true concentric tap threads, fully-formed, clean and accurate. They're manufactured on the world's most modern equipment—to save you minutes and money.

THE LAMSON & SESSIONS CO., 1971 West 85th Street, Cleveland 2, O.
Plants at Cleveland and Kent, Ohio • Birmingham • Chicago

AUTOMOTIVE FASTENERS
LAMSON & SESSIONS
Ask your distributor for the Lamson Line

● WHICH IS IT?

ANSWER... (To Question on P. 160)
Studebaker has the unique record of never having a strike in 95 years of existence.

(Another Cartoon Quiz is on P. 166)

For low friction, too...



but 26 basic designs

OF SEALED POWER PISTON RINGS

LOW FRICTION is one of the four basic requirements for balanced performance in piston rings. The other three are *oil control, blow-by control,* and minimum wear—and you get ALL FOUR in Sealed Power Individually Engineered Ring Sets. Each Sealed Power Set is selected from twenty-six (26) basic designs of Sealed Power Piston Rings. Whatever the make, model or cylinder wear condition, there's a Sealed Power Set specifically engineered to do the best possible job. Sealed Power has been refining these sets eight years —has been producing rings for car, truck and engine builders 36 years. For balanced performance, repower with Sealed Power motor parts. Sold by leading distributors. Sealed Power Corporation, Muskegon, Michigan and Stratford, Ontario.

Piston Rings, Pistons, Cylinder Sleeves, Piston Pins, Valves, Water Pumps, Bolts, Bushings, Tie Rods, Front End Parts



INDIVIDUALLY ENGINEERED

SEALED POWER PISTON RINGS

BEST IN NEW TRUCKS! ★ BEST IN OLD TRUCKS!

Keep your War Bonds! Get $4 for $3!

takes more

built stronger—

Saf-Flex Cord, Extra-Cushion Rubber between plies, Thermoweld Construction and exclusive Affinite Tread make it a *tougher* tire!

runs cooler—

It's the *only* truck tire that's Heat-Vented. Dissipates internal friction heat—*Truck Tire Enemy Number One!*

lasts longer—

Cuts cost-per-mile two ways: gives you more *original* miles, and *more miles from more recaps!*

SEIBERLING RUBBER COMPANY, Akron, Ohio • Toronto, Ontario, Canada

SEIBERLING

Heat-Vented

TRUCK TIRES




recaps
SEIBERLING
HIGHWAY TYPE
SPECIAL SERVICE
HEAT VENTED
SEIBERLING TIRES

Detroit Special Equipment Show Reveals Possibilities for "Tailor-Made" Jobs

The increasing trend toward special truck equipment to meet particular needs of individual operators was evident in the exhibition held in Detroit recently under joint sponsorship of the Detroit Chevrolet Zone office and special equipment manufacturers. The display included 165 pieces of equipment available from 34 distributors and manufacturers.

With continuing expansion of truck hauling, special equipment makers have been developing the particular adaptations needed in specific hauling jobs, thus widening the field of use for motor vehicles, according to J. W. Burke, Chevrolet truck manager. He pointed out that under the mass volume manufacturing methods in the truck industry, it is impossible for the truck builder to offer the infinite variety of combinations of special bodies, axles, brakes, auxiliary fuel tanks, and other adaptations required by a particular user, and that the dealer working with various equipment manufacturers can give the buyer a "tailor made" job.

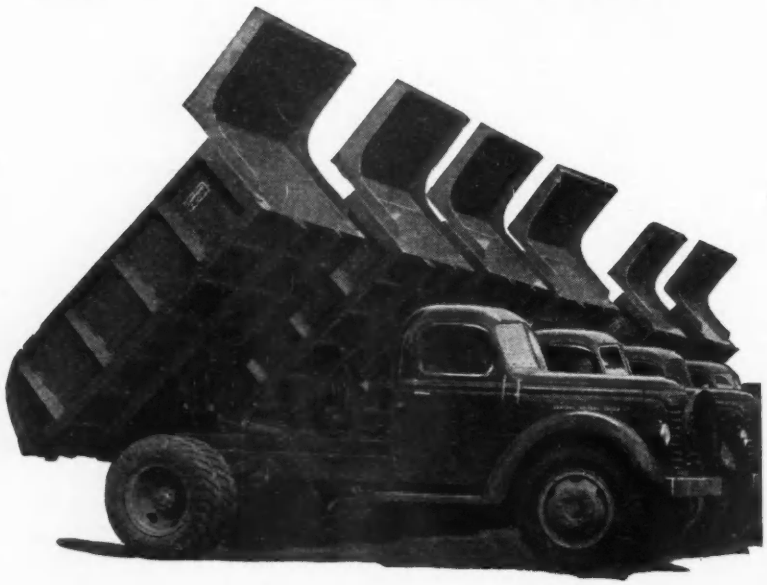
Probably the newest development shown was a hydraulically operated fifth-wheel mounting which enables the driver to move or relocate trailers without leaving the cab. Designed primarily for switching operations at terminal yards, the unit has a lifting capacity of 20 tons. Production of the unit (which is described in this issue on page 103) is just getting started. It has been under development for two years in cooperation with a mid-Western trucking company. The manufacturer states that one man can move twice as many trailers as is possible in the same time with two men using the conventional fixed mount.

Another interesting piece of equipment was a heavy-duty 60-amp generator for use on trucks equipped with telephone or short wave radio equipment. (See March issue, page 74.) The manufacturer says that such equipment also will be necessary if trucks are equipped with a new type of self-defrosting glass windshield designed to conduct electricity.

A development worthy of notice is the growing adoption of the wide-base rim on trucks as both standard and changeover equipment. Tire manufacturers have been promoting this idea for a long time, and Chevrolet, at least, now has adopted it as factory equipment on trucks using 17, 18, and 20 in. rims. The wide base unit is approximately 1 in. wider than the previous standard base rim. Advantages cited are that it provides a compression fit, concentric tire and rim, improved balance and runout, uniform driving and braking force around the bead, straighter sidewalls, more air for the same pressure, better ride, cooler running, more full and even tread contact, improved stability, and better mileage. (See August, 1946, issue, page 38, for full details.)

(TURN TO PAGE 168, PLEASE)

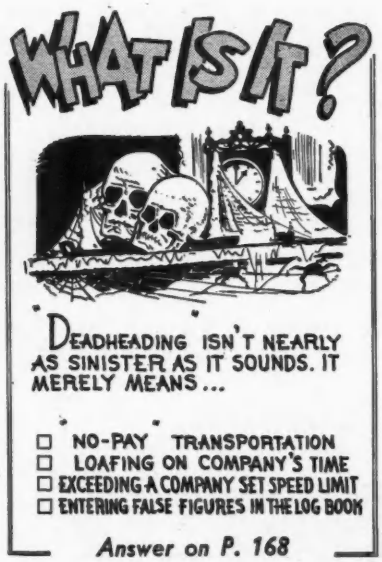
THERE'S A MARION BODY Made-To-The-Measure OF YOUR HAULING JOB



Whether your work calls for hauling 20 ton scoopsful of bedrock or special dumps for citrus pulp . . . there's a Marion body and hoist made to the measure of your particular hauling job. Every unit in the Marion complete line of standard and custom built equipment is designed "on the job" . . . under actual working conditions. This Marion feature assures top performance, trouble-free operation and rugged endurance under the most difficult hauling conditions.

See Your Distributor—Or Write

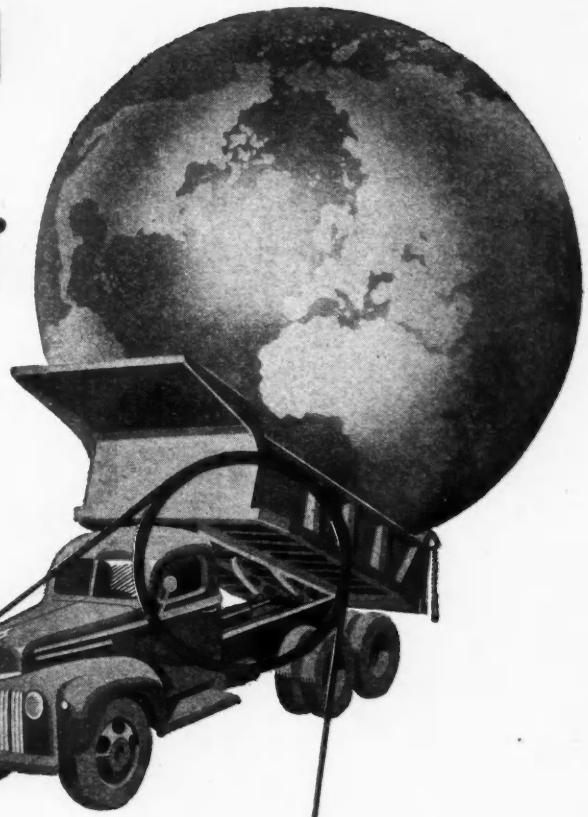
MARION METAL PRODUCTS CO.
MARION, OHIO



Answer on P. 168

MOVE THE EARTH WITH

GAR WOOD EQUIPMENT



Yes, Gar Wood Hydraulic Hoists and Dump Bodies move the earth. Not as illustrated, of course, but all over the world on earth moving projects such as dams, highways, railways, airports and many more, Gar Wood equipment is on the job, doing it fast, easily and economically.

In addition to earth moving there are Gar Wood Hoists and Bodies especially designed for the efficient hauling of coal, rock, sand, gravel, garbage, rubbish and other materials.



For the answer to your hauling problem consult your nearest Gar Wood Branch or Distributor. There's one in every principal city.

GAR WOOD INDUSTRIES, INC.
Hoist and Body Division
WAYNE, MICHIGAN

ALSO BUILDERS OF WINCHES & CRANES . . . TANKS . . . ROAD MACHINERY . . . DITCHERS & SHOVELS . . . HEATING UNITS . . . BOATS

Detroit Show

(CONTINUED FROM PAGE 166)

Also noticeable was the trend toward all-metal construction of van-type special bodies. While steel construction predominated, aluminum also was represented by a few exhibitors. Other equipment on exhibit included hoists, safety fuel tanks, electric road sander, lift tail gates, lime spreaders, slipover extension frames, elevating loading equipment, brake systems, platform hoists, all types of trailers, and similar equipment.

The Detroit show was the third in a series of regional shows to be held this year. Previous exhibits had been staged in Flint and Indianapolis, and similar shows have since been held in Shreveport, La., and Houston, Texas. It is planned to hold similar exhibits in most of the remaining zones throughout the country later this year. Fleet operators are welcome to attend, and in most instances receive personal invitations from either the zone office or the Chevrolet truck dealer.

CHEVROLET IMPROVEMENT

One of the features of the new Chevrolet is a new type of gasoline tank construction, which permits a 25 per cent increase in the flow of gas while filling the tank.

Clevite Bearing Has Electroplated Surface

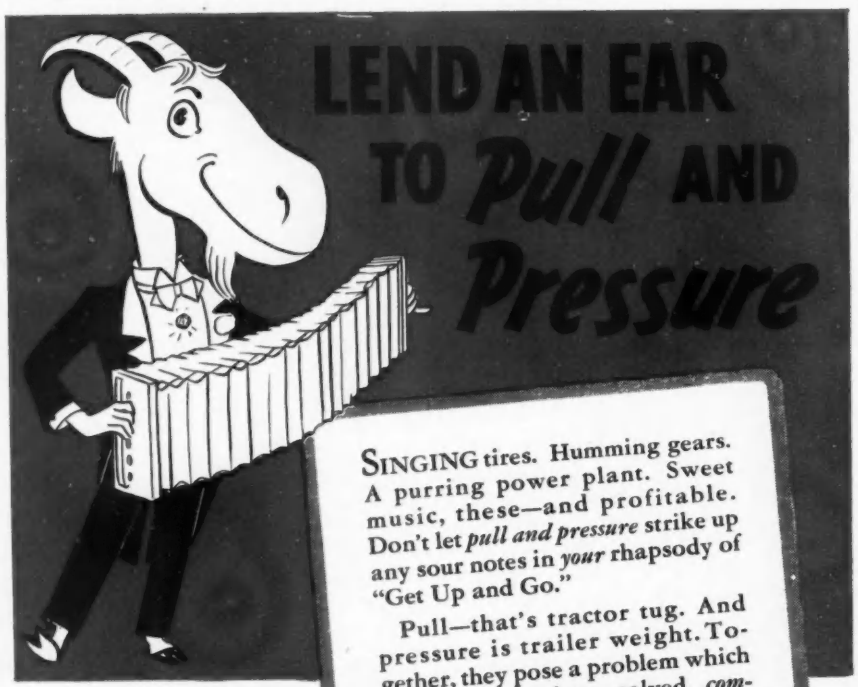
Said to be capable of carrying unit loading in excess of 3000 lb. per sq. in. for long service life, the Clevite 77 bearing produced by The Cleveland Graphite Bronze Co. for main and connecting rod application is being adopted as standard equipment by a group of the leading manufacturers of heavy-duty motor trucks. This bearing presents some marked advances in manufacturing techniques and features qualities of metallurgical control which are said to fit it for use in heavy-duty engines of all types. Despite its higher cost as compared with conventional bearings, some of the passenger car designers are said to be interested in applications on engines looking ahead several years.

Described briefly, Clevite 77 is a steel-back precision-type bearing produced by the continuous strip casting method with an intermediate layer of copper-lead alloy bonded to the steel back. Unique feature of the new technique is that the copper-lead strip is first processed through the press line for cutting to length and half-shell formation; then goes through the gamut of machine shop operations, winding up with the surface broaching of the half shell as if to complete a copper-lead bearing.

Then the machined shells go to the electroplating department for the deposition of an overlay of soft bearing metal. By a new process developed here, they deposit a uniform layer of a lead-tin-copper alloy and hold this layer to a specified thickness of 0.001 in. by precision electroplating. No further machining is required and the bearing is ready for installation.

This relatively soft overlay possesses the low friction and low rate of wear associated with white metal bearings, has an unusually high fatigue life, and provides embedability and conformability comparable to that of white metal. Good conformability permits the bearing to accommodate itself to the form of pins and journals by simple flow and without areas of varying unit loads. Thus it is said to have excellent break-in quality conducive to long life.

It has been demonstrated in recent years that thin bearing coatings have maximum resistance to fatigue failure. On the other hand, coatings of the range of .001 in. thickness must have adequate support and this is provided by the strong copper-lead matrix which has high load-carrying ability as well as great fatigue life.



SINGING tires. Humming gears. A purring power plant. Sweet music, these—and profitable. Don't let *pull and pressure* strike up any sour notes in *your* rhapsody of "Get Up and Go."

Pull—that's tractor tug. And pressure is trailer weight. Together, they pose a problem which ASF engineers have solved, *completely.* With their 40 years of railroad coupler experience, these specialists know that the *safety* of equipment, and of precious rolling loads, depends on whether a wheel can "take it."

Safety on Every Run

That's why Safety 5th Wheels are designed to carry trailer weight on *big-bearing-area* bracket trunnions—not on pins; why tractor pull and braking are transmitted through cast-steel members in compression—*not* through pins.

Get *all* the facts today! Automotive Division, American Steel Foundries, 400 N. Michigan Avenue, Chicago 11, Illinois.

DEALERS AND DISTRIBUTORS WHEREVER YOU ARE ... WHEREVER YOU GO



"400 Series" Wheel for General Highway Hauling. Ask Your Safety 5th Wheel Salesman for Folder 101, or Write Direct.

A·S·F Safety 5th WHEEL

● WHAT IS IT?

ANSWER ... (To Question on P. 166)

It's "no pay" transportation. A driver not on duty riding along in the cab with another driver is said to be "deadheading." A A truck returning empty to its terminal is also "deadheading."

(Another Quiz Cartoon is on P. 170)

Now

RAYON CORD TRUCK TIRES

with Rhino-Flex Carcass



TOUGH • FLEXIBLE • SAFE

HERE is the truck tire that can take a beating mile after mile—and snap back strong for more!

The name is Armstrong!

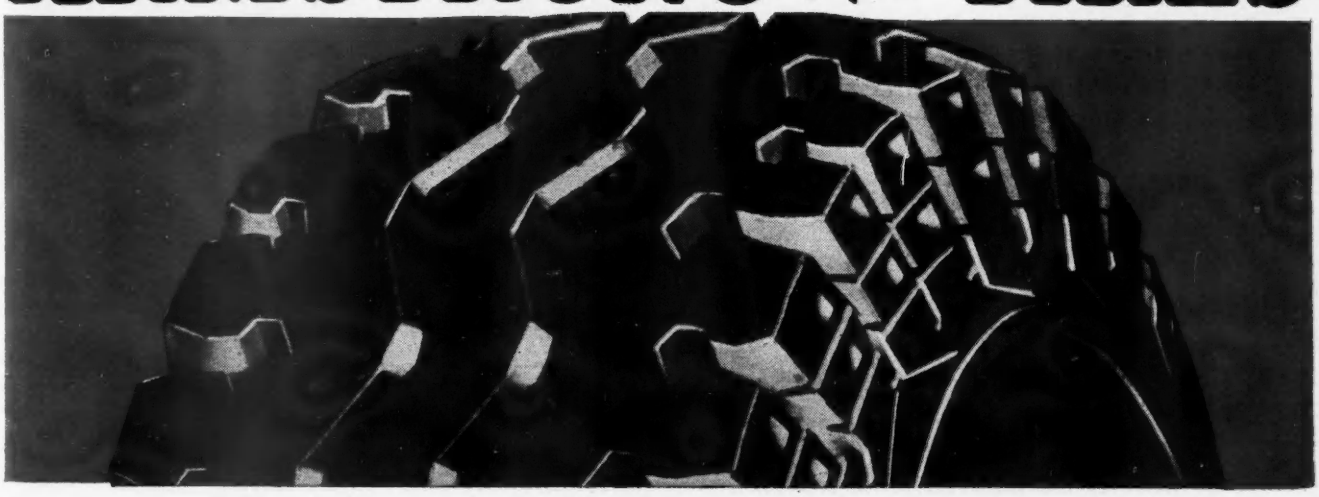
The carcass is the most important single factor in a tire. That's what makes Armstrong's Truck Tires with the new Rhino-Flex carcass the toughest, safest you can buy!

Developed for war—now Rhino-Flex Armstrongs are available for peacetime use. They're made with tougher, tighter twisted *rayon cord.* You get greater safety, more flexibility and cooler running.

Ask to see these new, super truck tires. Then compare! When you roll your truck on Armstrongs, you'll be convinced, once and for all—there's nothing better at any price.

Manufacturers of Quality Tires and Tubes since 1912 • General Offices and Plant—400 Elm Street, West Haven 16, Conn.

ARMSTRONG Rhino-Flex TIRES



Lenoir Case Threat to Private Carriers; Contention of For-Hire Carriers Opposed

Both the Private Carrier Conference of the American Trucking Associations, Inc., and the National Council of Private Motor Truck Owners, Inc., are currently intervening in a case before the Interstate Commerce Commission which, these groups contend, threatens the very existence of all private carrier operations.

The case, which rose to national prominence when intervening briefs were filed by common carrier interests of the ATA, involves the right of the Lenoir Chair Co. of Lenoir, N. C., to make special deliveries of a small percentage of its manufactured products as well as some raw materials for which a charge commensurate with common carrier rates is charged.

Both private carrier groups mentioned above have received permission from the ICC to intervene and have filed their briefs accordingly. It is the contention of the common carrier interest that no private carrier should be permitted to haul goods for which a charge is made.

In reviewing the case, Fred B. Hufnagel, Jr., chairman of the ATA's Private Carrier Conference had this to say:

"The Lenoir Chair Co., a furniture manufacturer, operates five over-the-road trucks to bring raw materials to its plant at Lenoir, N. C., and to carry manufactured furniture outbound to those customers near raw material sources, or who need fast—'special'—delivery.

"This delivery operation accounts for from 15 to 20 per cent of the company's shipments. the bulk of its shipments being made by rail or for-hire motor carrier.

"In some cases, on incoming shipments, a freight allowance is received from the raw material supplier, but in any event, on the Lenoir company's books the motor truck operation is credited with the freight charges. Outgoing shipments are billed f.o.b. the plant, plus transportation, and the figure quoted and billed approximates the rate charged by common carriers, in order to keep customers' charges consistent.

"These motor truck operations are not financially profitable, as, during the twelve months immediately preceding the taking of testimony by the I.C.C., the total trucking income amounted to $15,412 and the total trucking expenditures amounted to $21,935 with a net loss of $6,523. Since the furniture company's business grosses $3,200,000 a year, the trucking income amounts to less than five-tenths of one per cent of the total income.

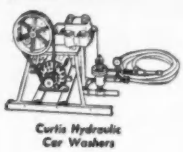
"On March 25, 1946, the Lenoir company applied to the I.C.C. for a permit of operation in interstate commerce as a con tract carrier. Simultaneously, it requested determination of its status, as to whether it was a common, contract, or private carrier. It contended that it was a private carrier.

"In order to collect evidence, a hearing was held at Charlotte, N. C., on Sept. 19, at which time the National Tank Truck Carriers, Inc., and the Regular Common

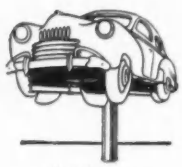
(TURN TO PAGE 174, PLEASE)

There's Rugged Dependability Built Into

CURTIS AIR COMPRESSORS



Curtis Hydraulic Car Washers



Curtis Hydraulic Car Lifts



Rugged, dependable, economical, the ability to stand up day after day under the toughest operating conditions have always been characteristics of every Curtis Air Compressor. These advantages are *built in* — the result of precision construction, quality materials, sound design and Curtis' 93 years of engineering experience. Others include:

1. Long life — low maintenance expense
2. Timken bearings
3. Self-oiling, controlled lubrication
4. Centrifugal unloader — positive unloaded starting
5. Curtis made tank — deep penetrating weld — smooth seams.

Bulletin C-6 gives full information on Curtis Compressors, car washers, and auto lifts. Write for it today.

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C-539A

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1970 Kienlen Avenue, St. Louis 20, Missouri

Please send me your Literature Kit C-6, which includes bulletins on Curtis Air Compressors, Curtis Auto Lifts and Curtis Car Washers.

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Firm.....
Street.....
City..... Zone..... State.....

HOW MANY TIMES?



FIFTY YEARS AGO, ONE MILLION PERSONS WERE EMPLOYED IN THE HORSE AND BUGGY TRANSPORTATION BUSINESS. TODAY, THE NUMBER EMPLOYED DIRECTLY BY THE AUTO INDUSTRY IS ...

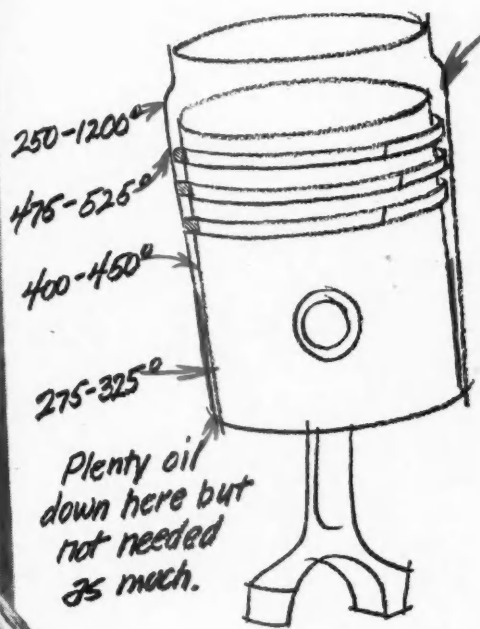
☐ TWICE AS GREAT
☐ THREE TIMES AS GREAT
☐ SEVEN TIMES AS GREAT
☐ TWENTY TIMES AS GREAT

Answer on P. 174

LUBE MEMO

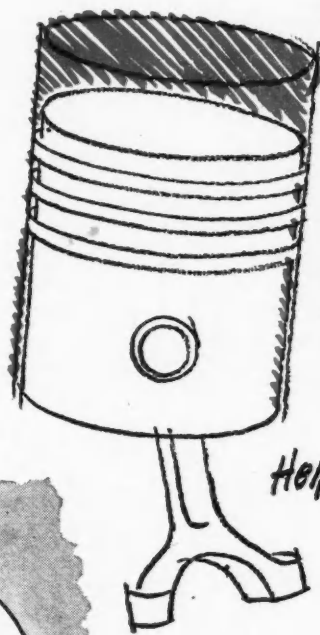
Idea for preventing tapered cylinders!

Liners wear tapered like this—
Most wear at top because ordinary lube oil scoots off hot metal, Leaves top of barrels bare.



Plenty oil down here but not needed as much.

RPM DELO
DIESEL ENGINE LUBRICATING OIL stops this kind of wear. Contains adhering agent which hugs hot metal surfaces most oils leave bare.



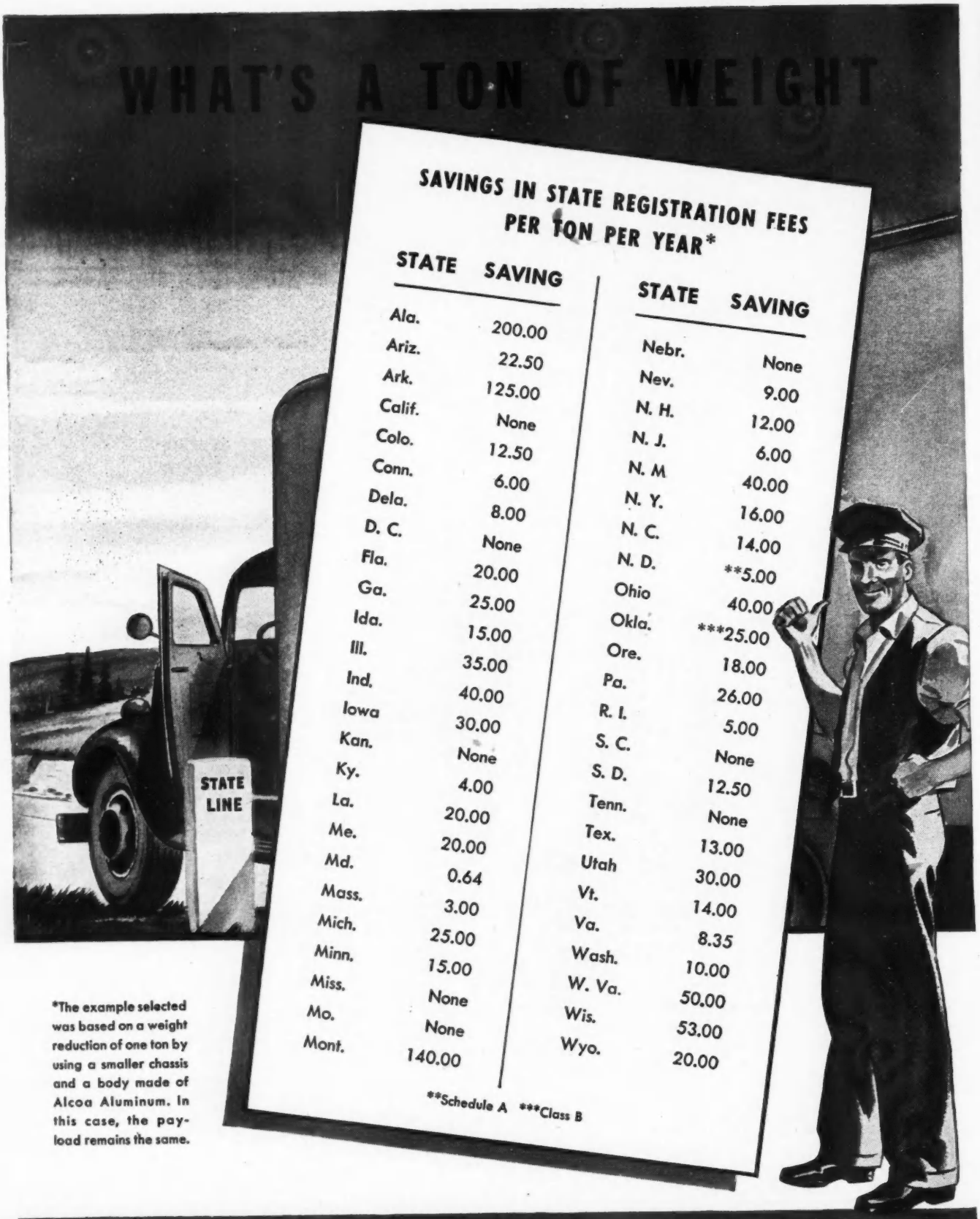
Helps prevent blowby.

DIESEL ENGINE RPM DELO LUBRICATING OIL

Call representative Today

STANDARD OF CALIFORNIA • San Francisco, Calif.
THE CALIFORNIA COMPANY • Denver, Colo.
STANDARD OIL COMPANY OF TEXAS • El Paso, Texas
THE CALIFORNIA OIL COMPANY • New York

WHAT'S A TON OF WEIGHT



SAVINGS IN STATE REGISTRATION FEES PER TON PER YEAR*

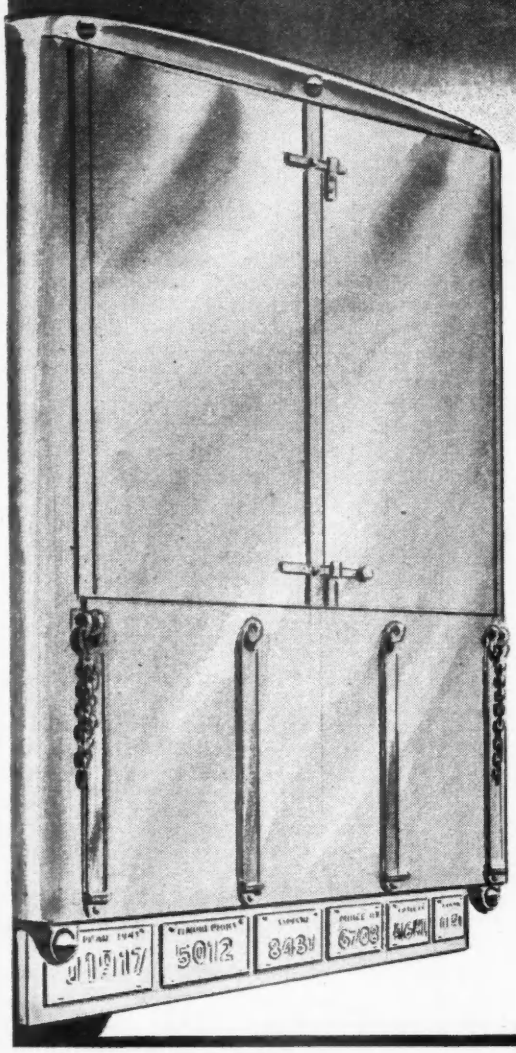
STATE	SAVING	STATE	SAVING
Ala.	200.00	Nebr.	None
Ariz.	22.50	Nev.	9.00
Ark.	125.00	N. H.	12.00
Calif.	None	N. J.	6.00
Colo.	12.50	N. M	40.00
Conn.	6.00	N. Y.	16.00
Dela.	8.00	N. C.	14.00
D. C.	None	N. D.	**5.00
Fla.	20.00	Ohio	40.00
Ga.	25.00	Okla.	***25.00
Ida.	15.00	Ore.	18.00
Ill.	35.00	Pa.	26.00
Ind.	40.00	R. I.	5.00
Iowa	30.00	S. C.	None
Kan.	None	S. D.	12.50
Ky.	4.00	Tenn.	None
La.	20.00	Tex.	13.00
Me.	20.00	Utah	30.00
Md.	0.64	Vt.	14.00
Mass.	3.00	Va.	8.35
Mich.	25.00	Wash.	10.00
Minn.	15.00	W. Va.	50.00
Miss.	None	Wis.	53.00
Mo.	None	Wyo.	20.00
Mont.	140.00		

**Schedule A ***Class B

*The example selected was based on a weight reduction of one ton by using a smaller chassis and a body made of Alcoa Aluminum. In this case, the payload remains the same.

Modern Trucking Calls for MAXIMUM Economies ⇨

Saved—WORTH IN TAXES?



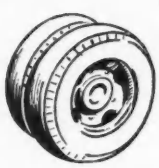
You don't have to operate interstate to appreciate these weight-saving figures. But if you do, they mount still higher. Take the truck in the picture—save a ton on its weight, and the total annual tax saving in its five-state operation is $117.00. That's *taxes*, alone!

Or, utilize the weight saving for carrying extra payload. That's when the value of Alcoa Aluminum really starts to add up.

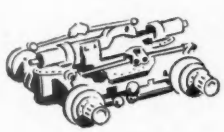
Your truck builder knows what aluminum can do for your operating and maintenance cost figures. And he knows what Alcoa can do with aluminum, too—permitting him to draw on the greatest fund of aluminum know-how in the world.

Give your truck builder the go-ahead. Ask him to save you all the weight that's possible—with wheels, axles, engine parts, trailer or body of Alcoa Aluminum. That's the way to compete profitably with other truck operators who, in increasing numbers, are going "all out" for Alcoa Aluminum! ALUMINUM COMPANY OF AMERICA, 2139 Gulf Building, Pittsburgh 19, Pennsylvania.

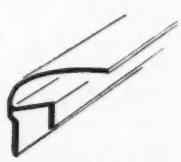
MORE people want MORE aluminum for MORE uses than ever



WHEELS of Alcoa Aluminum are rolling — saving plenty on weight and tire wear. Improved types are being tested now.



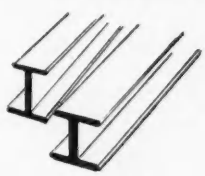
AXLES of Alcoa Aluminum are big weight-savers. By reducing unsprung weight, they save tires, lengthen life of the drive assembly.



EXTRUSIONS of Alcoa Aluminum provide intricate body members in light, ready-to-use form. Strength is designed in.



SHEET Aluminum from Alcoa is the ideal material for body panels. Leave it bare, or paint it for a longer-lasting paint job.



SHAPES of Alcoa Aluminum are available in many standard forms, for floor and body framing. Massive, yet light.

ALCOA FIRST IN ALUMINUM

IN EVERY COMMERCIAL FORM

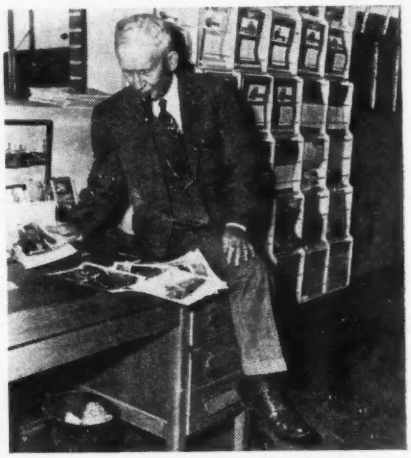
Lenoir Case

(CONTINUED FROM PAGE 170)

Carrier Conference of A.T.A. appeared and opposed the application. On Nov. 4, 1946, these organizations filed a brief stating their position as follows:

" 'There is a definite need for a more clear and precise definition of what constitutes private carriage. The feature that should motivate the establishment of private carrier transportation is the service feature without regard to any identifiable return for the cost of performing that transportation. Private carrier operations must be limited to a service feature and only service. Interveners * * * request the Commission to review its policy set forth in the Woitishek case * * * and find that operations for compensation must be divorced specifically from all private carrier operations.'

"The A.T.A. Private Carriers Conference," Mr. Hufnagel declared, "does not intend to sit idly back and permit other conferences thus to unduly restrict private carrier operations. The industries and distribution enterprises which depend on motor truck transportation must not be placed in a position where self-determination in respect to their shipping requirements is impossible."



With continuous truck selling since 1914 to his credit, M. S. Taggart of Mack's, Houston, Tex., factory branch is a leading contender for the title "America's Oldest Truck Salesman." Are there others who can beat his record?

"LIQUID SPRINGING"

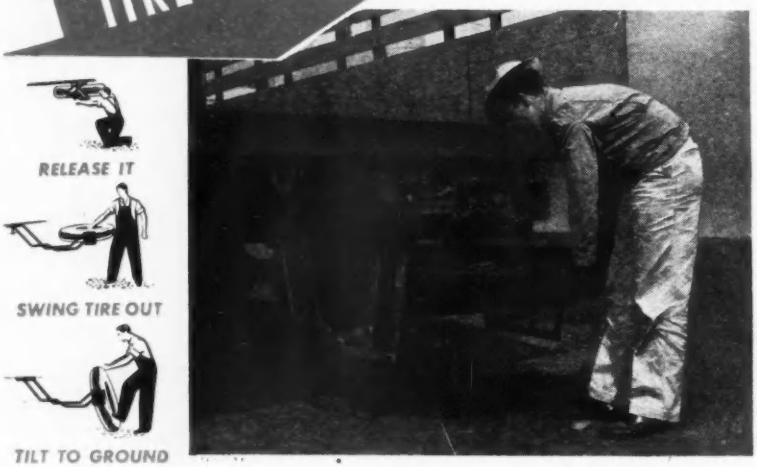
In his annual statement to stockholders, John H. Briggs, president, The Gabriel Co., Cleveland, confirmed a recent report that the company had entered into an exclusive license agreement with the Dowty Corp., of Cheltenham, England, for what is claimed to be a revolutionary type of motor vehicle suspension. Although it has been successfully employed in landing gear for military aircraft in England, the automotive application still is in its experimental stage and may take three years or more for its fruition.

According to a recent report the device presents a special adaptation of what may be termed an oil-filled direct acting shock absorber. While it resembles a hydraulic shock absorber, it differs materially in principle since both impact and rebound are oil cushioned entirely by compression of the liquid. The principle may be termed "liquid springing."

If and when commercial adaptation has reached a practical stage, four of the liquid spring units would be used per car, to the exclusion of conventional springs and shock absorbers. Because liquid springing would have to be tailor-fitted to each type of vehicle, it would be available only as original equipment.

TED TIRE CARRIER

Easy To Use



AT LAST!

A tire carrier that makes a one-man job of changing heavy truck tires.

The T.E.D. Tire Carrier does all the heavy work for you. Just release it . . . swing out the tire . . . tilt it to the ground—and you're ready to make the change. Roll the flat to the carrier—fasten it in place and an easy shove slides it back in place—high under the body away from road obstacles and the weather.

Easy to Mount

Can be mounted on either side or rear—on a new chassis or an old rig. Requires a space just eight inches deep by forty-two inches long (forty-eight inches on Model B) and is mounted by drilling just four holes to correspond with body or chassis requirements. You can mount it yourself—no precision specifications—no special tools required.

WRITE FOR COMPLETE DETAILS

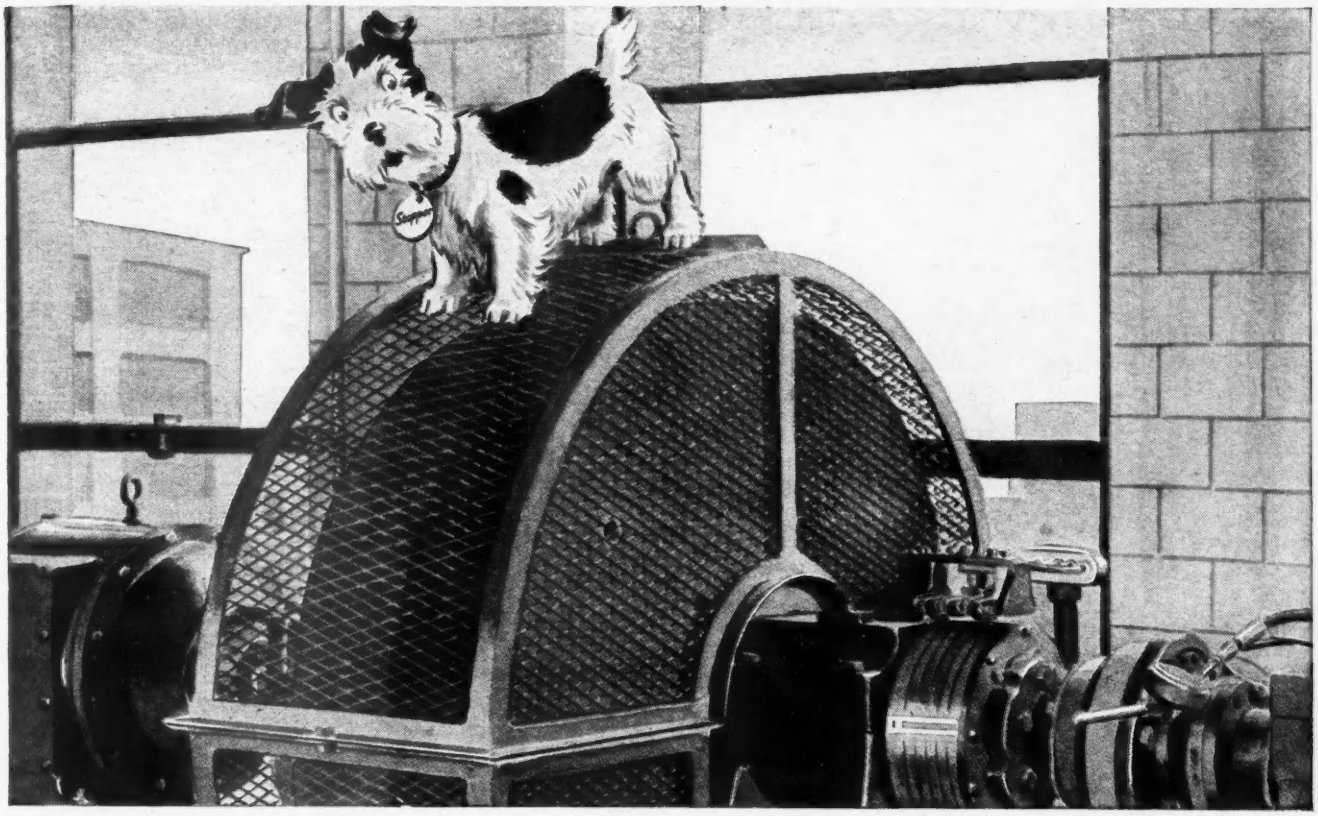
T.E.D. CORPORATION
928 So. Flower St., Los Angeles 15, Calif.

● HOW MANY TIMES?

ANSWER . . . (To Question on P. 170)

Seven times. Over seven million are employed in the manufacture, servicing and operation of motor vehicles. This does not include the many more millions who earn their livelihood indirectly from autos and trucks.

(Another Quiz Cartoon is on P. 176)



"Let's see you ride this to Buffalo," I said



I WAS FOLLOWING a friend of mine who usually has candy. He went into one of the American Brakeblok testing laboratories.

He looked at a big contraption, then glanced down at me and said, "Stopper, do you know what that is?"

"No, sir," I said politely, still figuring on the candy.

Then he said, "It's a Greyhound Bus!"

"Oh, yeah!" I barked back. "Let's see you ride it to Buffalo."

Then he explained that it is a dynamometer. It was testing brake lining under the exact conditions to be found on the left rear wheel of a bus.



What a beating that lining took! *Once every minute* the machine revved-up to the equivalent of 60 miles an hour—then snubbed down to a dead stop. Man, that's punishment! But it is one of the many ways American Brakeblok test their brake lining to make sure it is *the best that can be made*—long before it reaches a car, truck or bus.

That's why you do your customers a favor when you install American Brakeblok Brake Lining. That's why so many dealers, fleet operators and manufacturers look to American Brakeblok for the *best* answer to all brake lining problems.



AMERICAN Brake Shoe COMPANY

Distribution through 38 NAPA Warehouses

NAPA Assurance of Quality

American Brakeblok BRAKE LINING

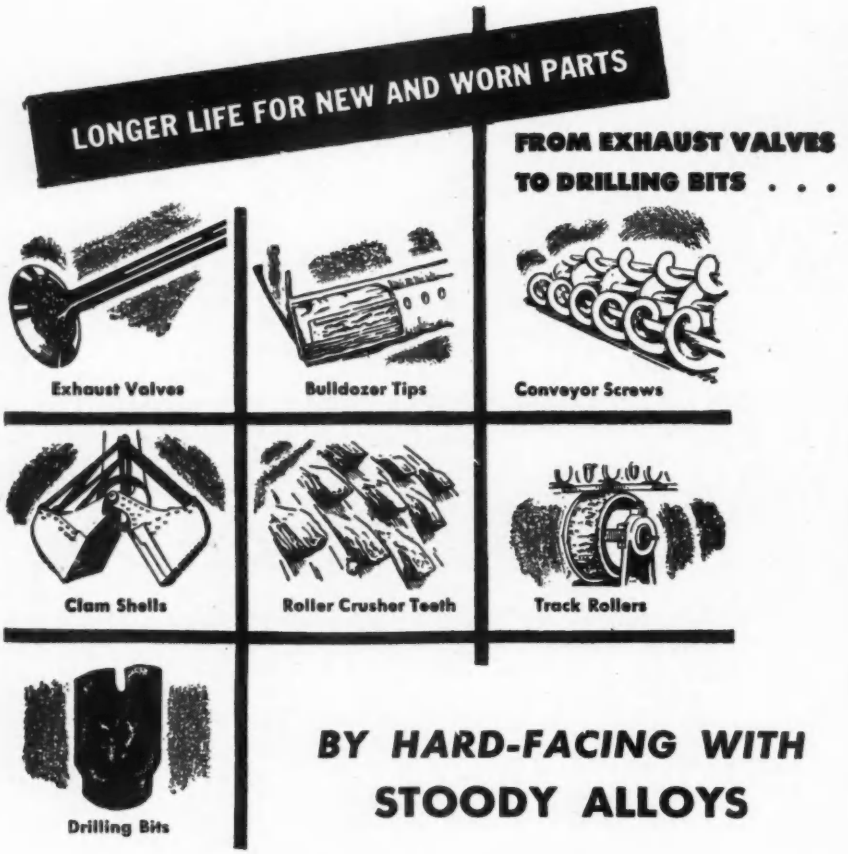
AMERICAN BRAKEBLOK DIVISION, DETROIT 9, MICHIGAN

FLEETMAN'S LIBRARY

A Review of Booklets and Catalogs Fleetmen Will Find Helpful

MOTOR VEHICLE DRIVER LICENSING, a 16-page booklet covering a recommended program for uniform driver licensing issued in the interest of accident prevention—published jointly by the American Assn. of Motor Vehicle Administrators and the National Conservation Bureau, accident prevention division of the Assn. of Casualty and Surety Executives.

LEARNING TO WELD, a 32-page booklet providing a simple basic approach for anyone interested in making a start in welding. Shows how to weld and how to apply arc welding to the repair of broken parts, the hard surfacing of worn parts and the building of equipment. Available from the Lincoln Electric Co., Cleveland Ohio, at 25 cents per copy.



BY HARD-FACING WITH STOODY ALLOYS

Whatever your problem — heat, corrosion, impact or abrasion — Stoody hard-facing alloys will give you the most effective solution. With one application of these wear-retarding materials the service life of both new and worn parts is increased many times.

For further details write for Catalog No. 40 — Air Reduction, General Offices, 60 East 42nd Street, New York 17, N. Y. In Texas: Magnolia Airco Gas Products Company, General Offices, Houston 1, Texas. Represented Internationally by Airco Export Corporation.

AIRCO **AIR REDUCTION**

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HEADQUARTERS FOR OXYGEN, ACETYLENE, AND OTHER GASES . . . CARBIDE . . . GAS WELDING AND CUTTING APPARATUS AND SUPPLIES . . . ARC WELDERS, ELECTRODES AND ACCESSORIES

GUIDEBOOK FOR SCHOOL ADMINISTRATORS —telling why high schools should have courses in driver education and training and how it may be done. This is the latest publication of the National Commission on Safety Education. Write the Automotive Safety Foundation, 700 Hill Building, Washington 6, D. C.

LOOSE LEAF EDITIONS of the three popular motor vehicle law books issued by the National Highway Users' Conference on a yearly subscription basis. The Conference will furnish information on changes in these phases of vehicle laws as part of the service. Includes State Restrictions on Motor Vehicle Sizes and Weights, Equipment Requirements for Motor Vehicles and Registration Fees and Special Taxes for Motor Vehicles.

NEW SAFETY HIGHWAY COURSE, containing safety material for class room study. Topics include information on the driver, habits, relationship to others, condition of highways, laws of the road, laws of physics, etc. Available from the Allen Publishing Co., 113 Center St., Stevens Point, Wis.

LEARN ARC WELDING, a 24-page publication showing functions of study pursued at the Hobart Trade School, Inc., Troy, Ohio. Write the Registrar of the school for a copy.

PREVENTIVE MAINTENANCE—KEY TO BETTER CUSTOMER RELATIONS, a new folder on auto service follow-up published by Remington Rand, Inc., 315 Fourth Ave., New York 10, N. Y. Information and illustrations show how the Visible Tip folder is used in service establishments in a systematized method of follow-up on customer's cars for periodic lubrication and various services.

FWD "M" SERIES FOLDER, an illustrated publication describing ten- and twelve-ton FWD trucks, built for heavy-duty service. Illustrations show engine and power transmission unit details. Write The Four Wheel Drive Auto Co., Clintonville, Wis.

(TURN TO PAGE 178, PLEASE)



"Wow," THE MAINTENANCE BOSS SHOUTED: "That's the lamp I've been dreaming about!"







1 "Lately," he shuddered, "I've had terrible dreams. Someone's always coming in and telling me about a powerful, compact two-way clearance or marker lamp that I could really use."
"What make?" I asked hopefully.
"Can't remember," he growled, "that's what's so terrible. This lamp meets I.C.C. requirements for drive-away vehicles, pole trailers and other vehicles in states requiring lamps with amber to front and red to rear, and—"

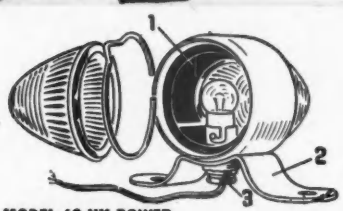
2 "Can it also be used," I interrupted, "as a clearance, marker or identification lamp on sides and tops of cabs, trailers and trucks?"
"Yes," he said, "and you should see its all-around compact construction! It's designed to set close to the top or sides of the body and to fit perfectly under the rub-rails for extra protection against breakage. It has two securely welded ears for quick, easy attachment to body and—"





3 "What about its lens?" I asked.
"Terrific," he exclaimed, "terrific! Each lens does the job of two ordinary lenses, because one part, the concentric rings, bullets the light for long distance lighting; while the other part, the radial flutes, directs a good volume of light to the side."
"How about weathering protection?" I asked.
"Oh," he replied, "this lamp has a patented sealer ring on each lens and—"

4 "An internal rubberized separating band," I added, "to provide positive protection against dust, dirt and water penetration."
"Why yes," he admitted. "How did you know?"
I handed him my 63 Hy-Power lamp. "Did it look anything like this?" I asked.
"Wow," he shouted. "That's the exact lamp I've been dreaming about! I'm really in luck!"
P. S. I was lucky too. You should see the order he gave me!



MODEL 63 HY-POWER TWO-WAY CLEARANCE OR MARKER LAMP

1. Rubberized separating band.
2. Rigid double mounting ears.
3. Rubber nib makes connection between bulb and wire spark-proof.

FAMOUS KING BEE PRODUCTS

PROTECTO Rubber Rim Truck Mirrors (PATENTED) — **HY-POWER** Truck Lamps (PATENTED)

Indestructible **FOTO-RAY** Reflectors (PATENTED)

Manufactured by AMERICAN AUTOMATIC DEVICES CO.
502 S. Throop Street, Chicago 7, Illinois

Fleetman's Library

(CONTINUED FROM PAGE 176)

DUO-SQUARE CATALOG, a 16-page publication showing the company's line of work holders—that is, devices for holding parts in proper position while welding. Illustrations show how the devices are used, and descriptive data gives design characteristics. Write McFerron-Myers Products Co., 308 Euclid Ave., Cleveland 14, Ohio.

CLARK TRUCTRACTOR CATALOG, a 36-page, illustrated publication showing the company's complete line of material handling machines, both gas and battery powered. Write the Tructractor Division of Clark Equipment Co., Battle Creek, Mich.

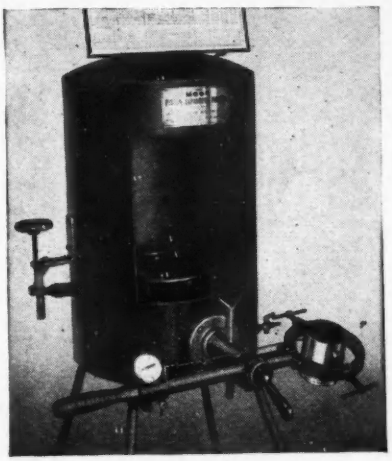
CONSTRUCTION REQUIREMENTS FOR SCHOOL BUSES, a new and revised issue of the National Highway Conference Users' book covering safety equipment and construction requirements for school buses. Contains 217 pages and sets forth the complete laws and regulations of the 48 states. Write NHUC at Washington, D. C.

RIVNUT DATA BOOK, a new edition of the 40-page original published by The B. F. Goodrich Co., Akron, Ohio. The data book describes construction details for each of the regular and special Rivnut types, lists sizes, dimensions and grip range identifications, details installation methods and tools.

ARISTO CRAFT POWER TOOLS CATALOG, a 32-page publication illustrating and describing the company's line of latest developments in power tools. Complete specifications on the tools are included. Write for Catalog No. 1, Aristo Power Tools, Inc., 601 W. Washington Blvd., Chicago 6, Ill.

BUILDING CONSTRUCTION CATALOG, available to those planning to build. Contains useful information on constructing foundations and basements, laying of various floor types, surfacing of interior and exterior wall surfaces, etc. Available from the Stonehard Co., 403 N. Broad St., Philadelphia 8, Pa.

POWDER METALLURGY CATALOG, a 44-page new edition which includes new sizes for the company's line of self-lubricating porous bronze bearings. Of particular interest is the section devoted to the correct design of powdered metal parts. Write the Keystone Carbon Co., St. Marys, Pa.



Moog Piston Ring jobbers are installing this new type piston expander which utilizes heat treatment, and is said to handle all type pistons in a matter of 40 to 60 seconds



When fleet operators and service superintendents discuss brake lining, it's only natural that Grizzly is brought into the conversation. Grizzly's position as one of the largest, most dependable brake lining manufacturers plus its enviable record of producing fine brake lining for both automotive and industrial fields for over 30 years, merit the projection of Grizzly into any brake lining discussion.

The next time brake lining or brake lining problems enter your job, consult Grizzly. Grizzly's research, engineering and manufacturing experiences can be of real assistance to you.

"There's a Grizzly Distributor near you—call him today!"
Grizzly Manufacturing Company, Paulding, Ohio.



"Bear in Mind". . . ask for

GRIZZLY
REG. U. S. PAT. OFF.
BRAKE LINING

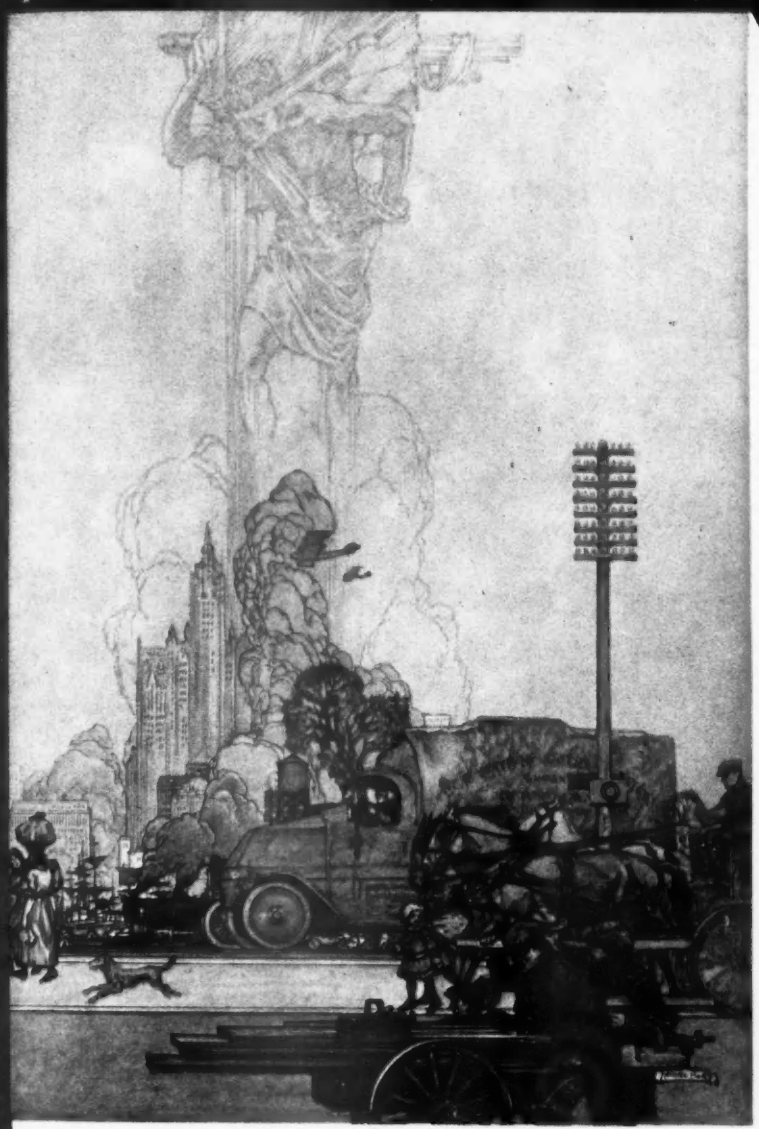
PFWA NAMES OFFICERS

At the 30th Annual Meeting of the Pennsylvania Furniture Warehousemen's Association, held in Pittsburgh, Feb. 14, the following officers were unanimously elected: Harry L. Gormley, New Castle, president; George Shanahan, vice-president representing Pittsburgh Chapter; Daniel Louderback, vice-president representing the Philadelphia Chapter; A. Duie Pyle, Coatesville, vice-president of the non-chapter group; Myles F. Rockey, New Cumberland, secretary; and John F. Christie, Jr., Bryn Mawr, treasurer.

● WHO IS IT?

ANSWER . . . (To Question on P. 176)
John L. Keeshin, who sold out the year-old Chicago Rockets to a firm headed by Jimmy Crowley.

(Another Quiz Cartoon is on P. 181)



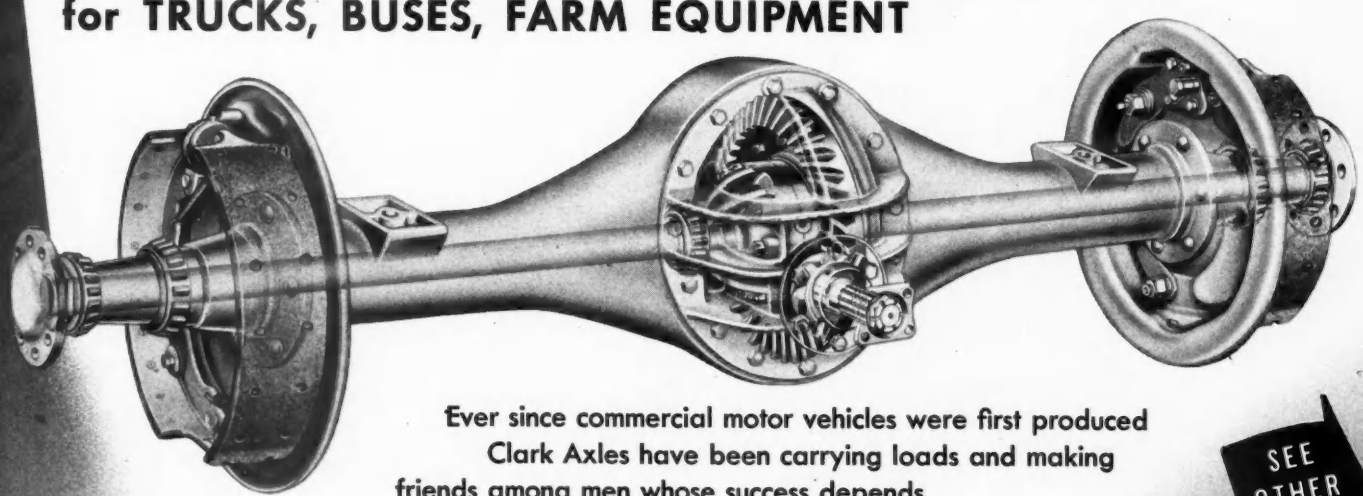
"The Spirit of Transportation"

by
FRANKLIN BOOTH

From a collection of twelve original interpretations for Clark Equipment Company by leading American artists.

the standard standby of revenue transportation

CLARK AXLES front and rear
for TRUCKS, BUSES, FARM EQUIPMENT

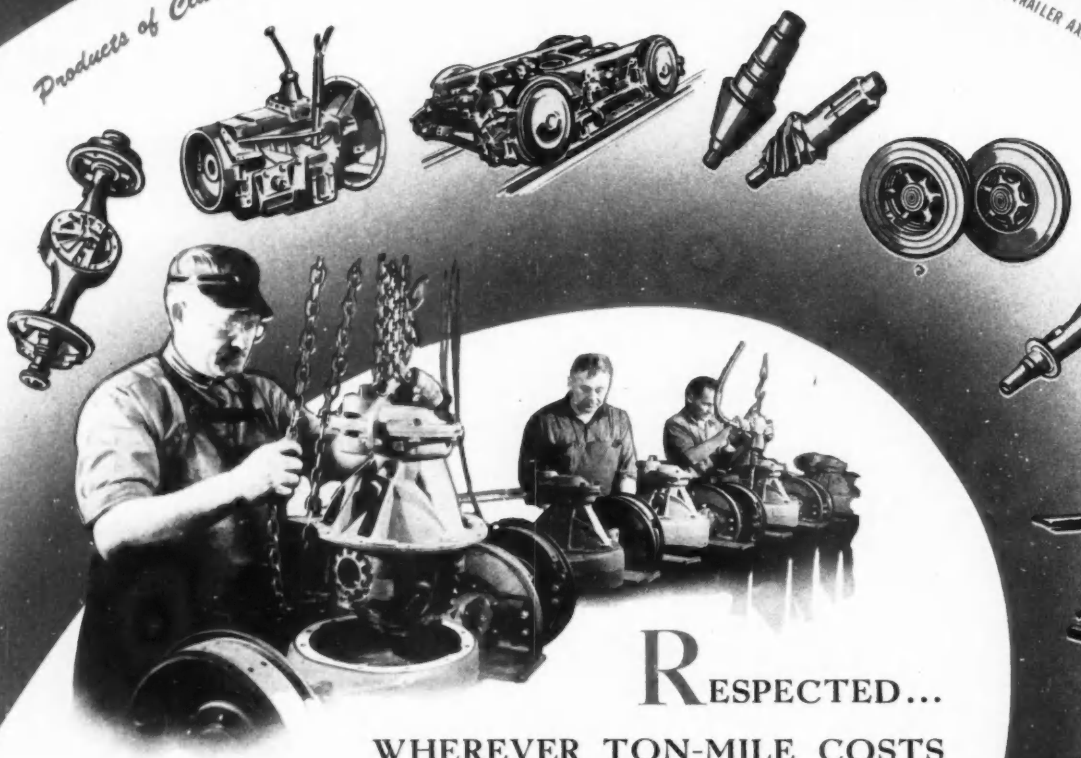


Ever since commercial motor vehicles were first produced Clark Axles have been carrying loads and making friends among men whose success depends on profitable operators.

SEE OTHER SIDE

ANOTHER PRODUCT OF CLARK EQUIPMENT COMPANY

Products of Clark— RAILWAY CAR TRUCKS • AXLE HOUSINGS • FRONT AND REAR AXLES FOR TRUCKS AND BUSES • EASY ROLL TRAILER AXLE • TRANSMISSIONS • INDUSTRIAL TRUCKS AND TRACTORS • METAL



RESPECTED...

WHEREVER TON-MILE COSTS ARE KNOWN

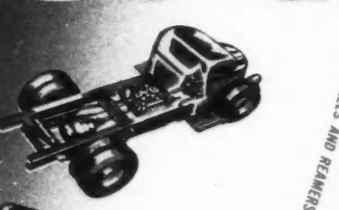
CLARK FRONT AXLES—good examples of steadily improving a product by making it simpler . . . husky units that take the road shocks, do their share of the breaking, and steer easily, safely.

CLARK DRIVING AXLES—with the famous one-piece forged heat-treated housing . . . a carrier unit designed and built to *maintain true alignment* . . . shafts and gears of proved hypoid principle specially heat treated for maximum strength and life . . . axles designed to make service as easy as possible.

There's no truer evidence of a vehicle's excellence and reliability than Clark axles, front and rear.

If you are interested in ton-mile costs, here's a practical suggestion: talk to Clark Engineers . . . about axles.





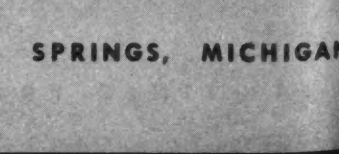














DRILLS AND REAMERS • GEARS AND FORGINGS • ELECTRIC STEEL CASTINGS

Prices on CLARK products will not be advanced in excess of increased costs.

CLARK EQUIPMENT COMPANY

BUCHANAN, MICHIGAN

OTHER PLANTS — BATTLE CREEK, JACKSON, BERRIEN SPRINGS, MICHIGAN

New Products

(CONTINUED FROM PAGE 104)

P193. Wheel Puller

The new Raybestos 501 Universal Wheel Puller set developed by the Raybestos Division of Raybestos-Manhattan, Inc., Bridgeport, Conn., requires no adjustments or changing of jaws.



Made up of five pullers, the set is capable of servicing all popular cars made in the past 15 years. Equipment contains wheel puller numbers 429, 433, 439, 441 and 442; also one power screw and varied size thrust nuts.

A feature of the rigid one-piece power screw used in the set is that any give or spring found so often in other types of wheel pullers is eliminated.

Use Free Postcard For More Details.

P194. Spotlight Lamp

A new hermetically sealed all-glass aluminized reflector spotlight lamp for motor vehicles is available from Westinghouse Electric Corp.

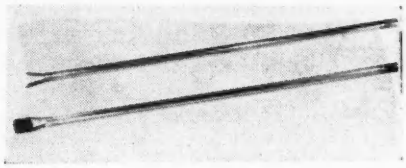
The new lamp, No. 4535, has special design features to enable it to provide a reasonably narrow (6 deg.) beam having high beam candlepower (115,000 cp). The filament is shielded to prevent uncontrolled direct light issuing from the reflector which would create glare due to foreground illumination.

The hermetically-sealed reflector of flashed aluminum has an exceptionally high reflection factor (93 per cent) and will not deteriorate when the lamp is exposed to weather or gas fumes. Furthermore, there is virtually no candle power depreciation throughout life, according to the manufacturer.

Use Free Postcard For More Details.

P195. Axle Remover

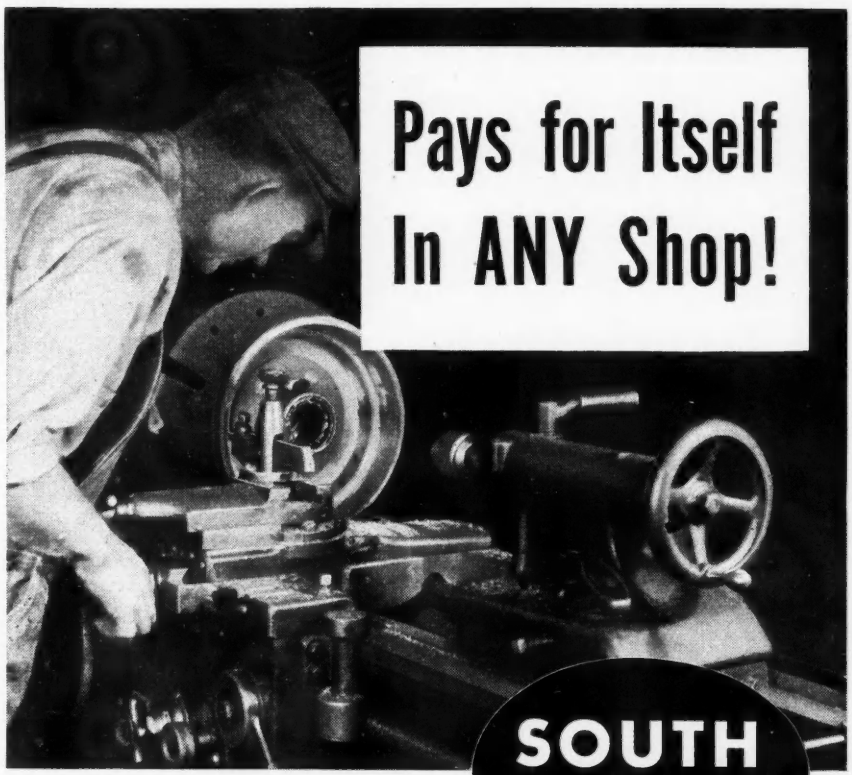
A new tool for removing axle stubs of a short clean break which occur next to the differential side gear is being marketed by W. F. Dritley, Benton Harbor, Mich. The tool will fit any axle from 1 to 2½ in. in diameter. The vanadium tool steel jaws, actuated by a hand nut at the opposite end of the tool, fit into the splines so that outside diameter is no larger than axle diameter at its largest point. Grip is



powerful enough to support 20-lb. axle shaft in hanging position.

Use Free Postcard For More Details.

(TURN TO PAGE 184, PLEASE)



Truing a brake drum in a South Bend 16" Lathe

A South Bend Precision Lathe will pay for itself time and again in the automotive maintenance shop by helping to turn out more and better work in less time and at lower cost. The ability to perform reconditioning operations on pistons, valves, shafts, king pins, axles, brake drums, commutators, bushings, and scores of other parts right in your own shop, and to make new parts when needed, will speed maintenance jobs, get fleet units back on the road sooner, and result in more pay miles per unit per year. South Bend Precision Lathes are made with 9", 10", 13", 14½", and 16" swings. Write today for complete Catalog 100 which contains detailed specifications.

How to Run a Lathe

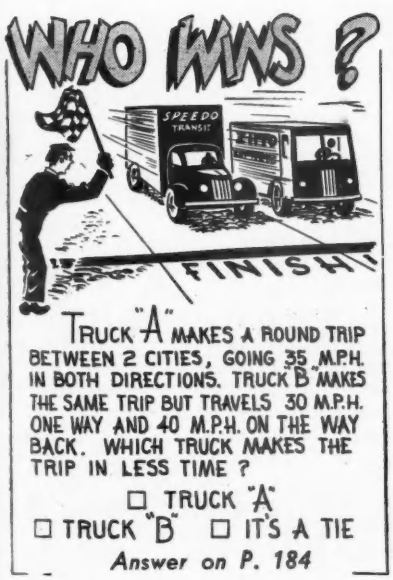
Handbook on operation and care of metal working lathes. Contains 128 pages. Complete, concise, authoritative and heavily illustrated. Sent postpaid for 25c.



LATHE BUILDERS SINCE 1906

SOUTH BEND LATHE WORKS

445 E. Madison St., South Bend 22, Indiana



Answer on P. 184

Allied brings you the most-wanted quality in Motor Parts . . .

Accuracy*

* **ACCURACY** that permits better installations

* **ACCURACY** that results in better performance

* **ACCURACY** that enables you to do the job faster

Pistons · Piston Pins
Piston Pin Bushings
Piston Pin Set Screws
Piston Pin Lock Rings
Valves · Valve Keys
Valve Guides · Valve Springs
Expansion Plugs · Cylinder Sleeves
Cylinder Sleeve Assemblies
Water Pumps
Water Pump Parts and Packing

NAPA Assurance of Quality



When the Motor is Down . .

● In every phase of fleet maintenance and operation, Allied Accuracy works to your advantage. When the pressure is on to get the job done, and put the unit back in service, it saves shop time.

When the job goes back in service, experience will show that you cannot buy better performance, greater economy or longer life in motor parts, anywhere, at any price.

The production facilities and manufacturing capacity of the great plants which produce Allied Motor Parts are unsurpassed in the motor parts industry. They can be relied on to supply you with parts which consistently equal or better the parts they replace.

On a level with Allied Accuracy is the comprehensive, cooperative service on motor parts for cars and trucks of all makes, which Allied Jobbers everywhere are equipped to give you.

ALLIED MOTOR PARTS COMPANY • Detroit 1, Michigan



..Build it Up with

Allied MOTOR PARTS

Allied Motor Parts are quickly available from NAPA Jobbers everywhere. Master stocks maintained in 39 NAPA Warehouses.

New Products

(CONTINUED FROM PAGE 181)

P196. Hydraulic Jack

A new Rumsey oversize 2-ton Automobile Jack with an automatic 2-speed feature has been announced by Rumsey Products, Inc., Seneca Falls, N. Y.

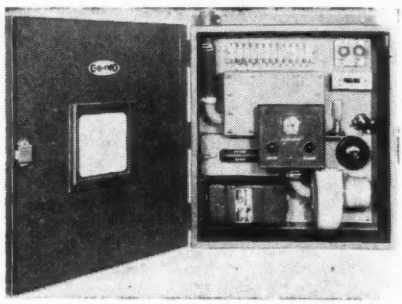
The new jack is a heavy-duty, precision-built tool, designed with a short frame and exceedingly long handle for efficiency and all around service, where dollying is not the prime consideration.

One, two or three strokes raise the saddle to engagement with the load at which point the high pressure pump takes over automatically. No levers or gadgets need be manipulated. The second speed is completely automatic, enabling the average man to lift the maximum load with ease. The range of lift is 4¼ to 22¾ in. An automatic safety device to prevent overloading during lift is incorporated in the jack. All wheels have roller bearings.

Use Free Postcard For More Details.

P197. Smoke Detector

A new smoke detector, designed to detect fires in warehouses or other storage space, is announced by the C-O-Two Fire Equipment Co., Newark, N. J. Featuring an enclosed light beam, it is fully approved by the Underwriters' Laboratories and operates on the principle of light reflected by smoke particles on to a photo-



electric cell. Air samples are continuously drawn into a detecting chamber, where, at the first sign of smoke, a red smoke indicating lamp is lighted and an alarm sounds.

Use Free Postcard For More Details.

P198. Hub Cap Remover



A handy new hub and grease cap remover has been announced by the Bear Mfg. Co., Rock Island, Ill.

Only slight pressure is needed to lift off either the hub or grease cap. All danger of marring or denting hub caps is eliminated.

Use Free Postcard for More Details.

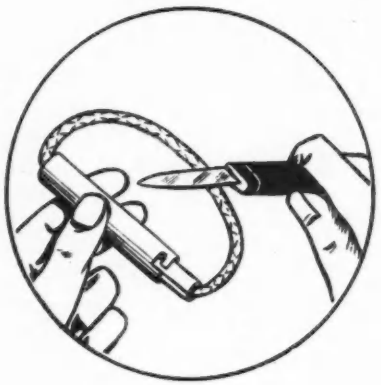
P199. Spray Booths

A new streamlined type spray booth for automotive refinishing has been developed and soon will be marketed by the DeVilbiss Co., of Toledo, Ohio.

The innovations incorporated in the new booth are highlighted by a huge glass observation bay which provides an unobstructed interior view, facilitates work su-

(TURN TO PAGE 186, PLEASE)

FREE!



SIGNAL-STAT
Ready Wired Fuse-in-Line Receptacles with Fuses

Just cut the wire and splice into any electrical line on your vehicle . . . fuse safety in a jiffy! Better, safer, cleaner than a fuse block. No hole drilling, no soldering.

FREE SAMPLE . . . Mail the coupon below—no obligation.



Patented

Other SIGNAL-STAT Products

Directional Signal Lamps with the famous SIGNAL-STAT Burn-out Proof Signal Switch. Lamps and switches available in complete sets or as replacement units.

SIGNAL-STAT PRODUCTS ARE SOLD THRU JOBBERS

COUPON FOR FREE FUSE-IN-LINE RECEPTACLE WITH FUSE

Please send me your free sample of the SIGNAL-STAT Fuse-in-Line Receptacle with Fuse.

NAME _____

BUSINESS NAME _____

STREET _____

CITY _____ STATE _____

SIGNAL-STAT CORPORATION
1430 HERKIMER STREET, BROOKLYN 33, NEW YORK

● WHO WINS?

ANSWER . . . (To Question on P. 181)

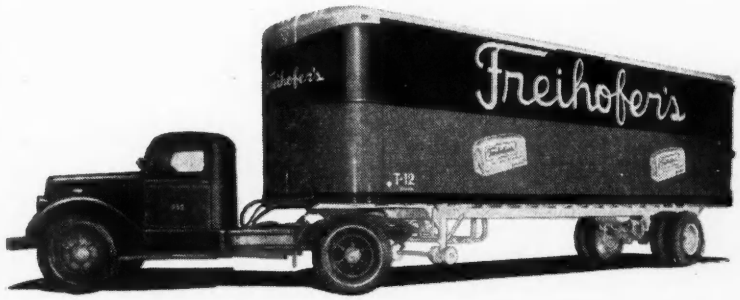
Truck "A" traveling at the uniform rate of 35 m.p.h. will win. Figure it out for yourself. Suppose the distance is 100 miles each way (or any other distance will do). Truck "A" makes one way in 2.86 hours and the return trip in the same time, or a total of 5.72 hours for the round trip. Truck "B" at 30 m.p.h. makes the one trip in 3.33 hours. At 40 m.p.h., the return trip takes 2.5 hours, making the total time 5.85 hours.

(Another Cartoon Quiz is on P. 186)

OK Motor Service, Inc., operates from its Chicago terminal with top-flight service to Milwaukee and intermediate points — also to Waukesha, Wisconsin. Mr. Tony Cosentino, OK President, stated that as a result of extensive experiments and road-tests, he believes Trailmobile's overall construction is superior — and that Trailmobile tandems greatly increase tire mileage.



Freihofer Baking Company, one of the largest Eastern bakeries, gives daily service throughout the Philadelphia area and neighboring counties. Mr. Joseph McGrath, Freihofer Garage Superintendent, asserted that Trailmobile is more economical to operate — that it is as strong as many heavier trailers, but light enough for easy handling, quicker pick-up and better speed.



United Motor Freight Terminal Company of Birmingham — rolling up top common carrier service in Alabama and Georgia — has recently joined the trend to Trailmobile. According to Mr. E. C. Dixon, the Company Auditor, Trailmobile's new tandem is responsible for real savings in operation — having already greatly reduced this company's tire expense.



For Lower Operating Costs and Less Maintenance

The Trend is to TRAILMOBILE

Among the foremost reasons for trailer users' nationwide swing to Trailmobile is the fact that its superior overall construction results in much less maintenance and sharply reduced operating costs!

Advanced engineering has given Trailmobile tremendous strength — while eliminating all unnecessary weight. The result is a rugged, integrally built unit, every member of which carries its proportionate share of bigger payloads—over longer, trouble-free life!

Moreover, every Trailmobile is backed by 73 Customer Service Centers — where factory-trained specialists save you time and money, with prompt, high-standard service.

Users everywhere—like those shown here—count on Trailmobile operation to cut costs—and roll-up greater profits. Check with your nearby Trailmobile Branch for all the features that speed the trend to TRAILMOBILE.

THE TRAILMOBILE COMPANY — CINCINNATI 9, OHIO

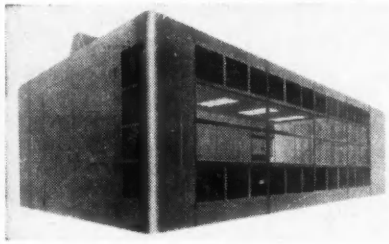
New Products

(CONTINUED FROM PAGE 184)

pervision which can be maintained at all times and contributes to the obtainment of top-quality work.

Features incorporated in the spray booth include: cross flow ventilation, fluorescent lighting, a paint mixing and cleaning bench, a paint and equipment cabinet and a clothes locker. An improved exhaust fan is also incorporated in the booth.

For large trucks, trailers and buses the company has developed the CPS-603 complete paint shop. Among the improved features of this unit are: filter type doors arranged for convenient access, fluorescent lighting, improved exhaust outlet connection, rugged frame construction and carefully matched spray and air compression outfits.



The spray booths and exhaust systems meet the requirements of Fire Underwriters and can be supplied to conform to every state and local regulation.

Use Free Postcard For More Details.

P200. Air Cleaner

Designed for optional use with all current types of Bendix-Westinghouse air compressors, the new Oil Bath Air Cleaner offers many obvious advantages to the operator of air braked vehicles.

Combining all the recognized qualities of the standard curled hair type strainer, the new oil bath air cleaner, as its name implies, adds an oil bath to its effectiveness.



The design of this unit is such that air entering the compressor must reverse its direction immediately above an oil bath and then pass through curled hair, packed in the inner cartridge, before it can enter the intake manifold.

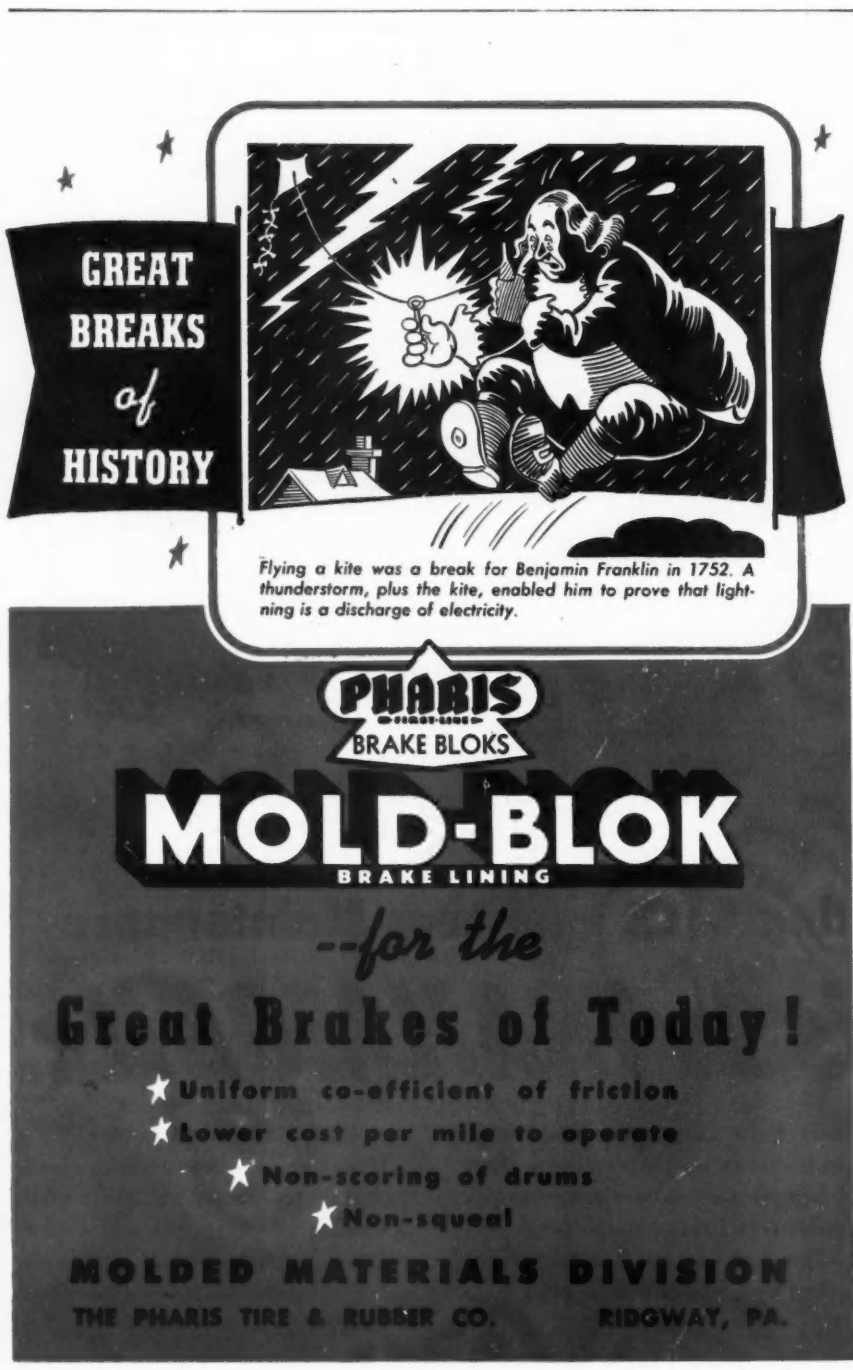
Four in. long, 3 in. wide, and 5 in. high, this device features simple construction, easy application, and almost negligible attention to keep it at peak performance, according to the manufacturer.

Use Free Postcard For More Details.

P201. Plastic Coating

A new water-thin, crystal-clear plastic finish forms a brilliant, durable coating on the surface of trucks or autos. The plastic is applied with a cloth to the body, metal parts, hub caps, running boards, leather

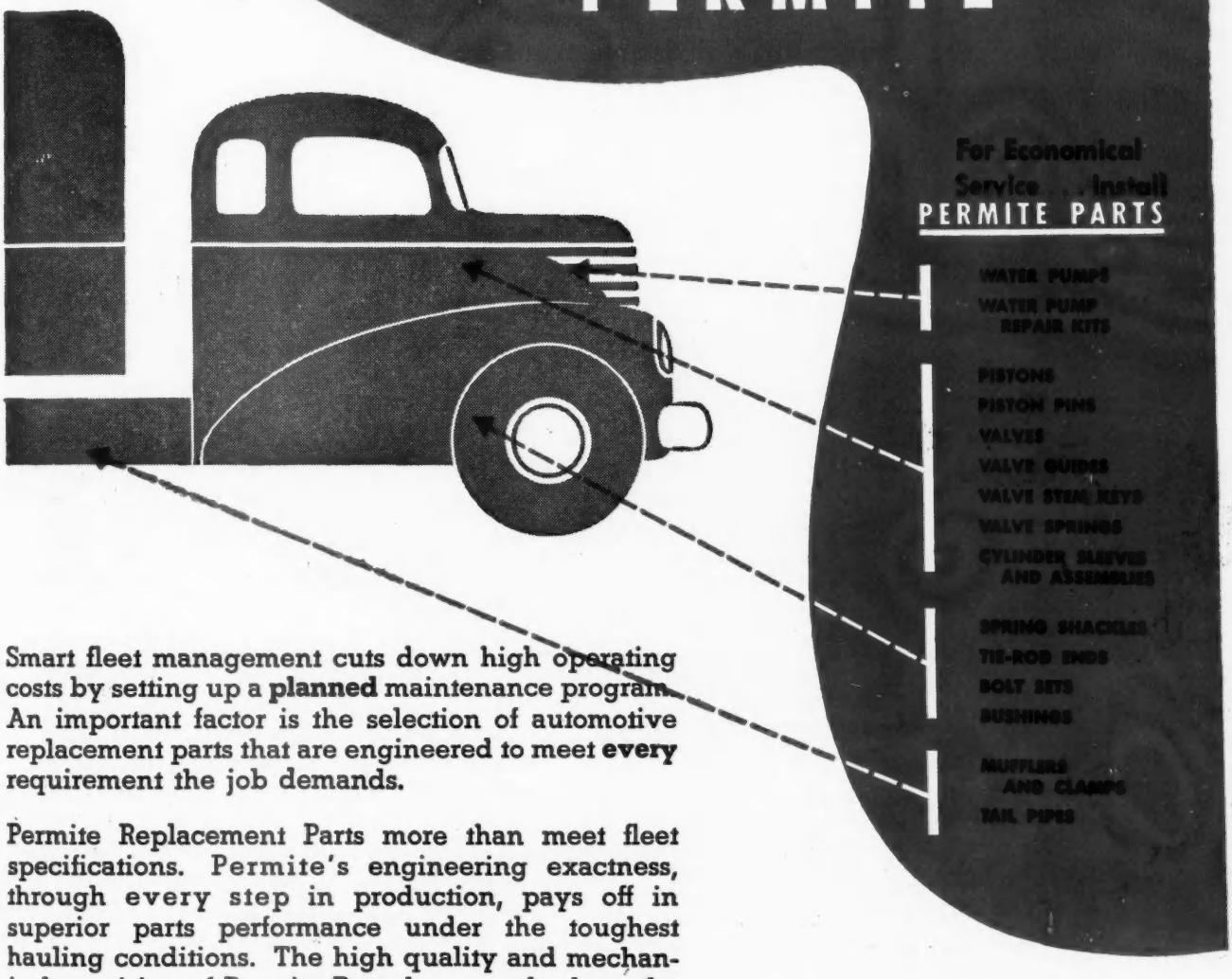
(TURN TO PAGE 189, PLEASE)





Answer on P. 189

. . . in shops where PM means PLANNED MAINTENANCE . . . replacement parts are PERMITE



Smart fleet management cuts down high operating costs by setting up a **planned** maintenance program. An important factor is the selection of automotive replacement parts that are engineered to meet **every** requirement the job demands.

Permite Replacement Parts more than meet fleet specifications. Permite's engineering exactness, through every step in production, pays off in superior parts performance under the toughest hauling conditions. The high quality and mechanical precision of Permite Parts have made them the preferred replacement in many fleet maintenance programs. To cut **your** operating costs, replace with Permite Parts. There is a Permite Jobber near you.

ALUMINUM INDUSTRIES, Inc.
CINCINNATI 25, OHIO

PERMITE

REPLACEMENT PARTS

Cargo Covers That Deliver

You can be sure of more cargo protection per dollar when your covers are made of Mt. Vernon Extra duck.

Because Mt. Vernon Extra is spun and woven from top grades of cotton to a high degree of uniformity...with more uniform strength ...more uniform toughness that insures greater protection over a longer period. For cargo covers that deliver the goods in longer wear and more satisfactory service, specify Mt. Vernon Extra duck.



Mt. Vernon-Woodberry Mills

TURNER HALSEY
COMPANY
Selling Agents
40 WORTH ST. • NEW YORK

Branch Offices: CHICAGO • NEW ORLEANS • ATLANTA • BALTIMORE • BOSTON • LOS ANGELES • AKRON

New Products

(CONTINUED FROM PAGE 186)

upholstery, steering wheel and interior trim.

This long-wearing coating is said to resist alcohol, alkalis and most chemicals. It is not a paint or varnish and therefore it will not crack, graze or flake off, according to the manufacturer. It is touch dry in 10 min. and hard dry in 6 hrs.

Now available from the Reyam Plastic Products Co., 1525 E. 53rd St., Chicago, Ill.

Use Free Postcard For More Details.

P202. Engine Sling

A new Bulldozer Engine Lift announced by the Wire & Cable Division of the Wind Turbine Co., West Chester, Pa., is designed for one-man control of lifts in and out of tight mountings on cars and trucks. The



lift consists of a 22-in. two-arm sling for use with any standard hoist. Each arm is fitted with heavy clamps for quick, accident-proof attachment to engine head bolts or studs. One mechanic can handle most jobs without stripping the engine of accessories or risking damage to other parts. Minimum breaking strength of the engine lift is 4000 lb. Use of "Pres-Tite" cable connector eliminates the more undesirable features of a splice and the danger of "home-made" slings.

Use Free Postcard For More Details.

P203. Underbody Gun

The Black Mfg. Co., Baltimore, Md., announces a new underbody gun, to be known as the "Miff-Gun." It is designed specifically for the application of all types of underbody materials. A steadier, smoother flow of materials is claimed because of the gun's improved nozzle and valve design. May be used with either a pump or pressure hook-up.

Use Free Postcard For More Details.

P204. Cold Cleaner

Faster and more thorough stripping of carbon, paint, varnish, adhesive dirt, oil and grease from automotive engines and parts is claimed with a new cold tank cleaner, according to the manufacturer, Turco Products, Inc., Los Angeles, Cal.

Turco Transpo is designed for operation at room temperature, being most effective and economical when it is used between 65 deg. F. and 85 deg. F. It is non-inflammable and made virtually odorless through a liquid seal which also protects the life of the compound and assures its continued operating efficiency.

(TURN TO NEXT PAGE, PLEASE)

● HOW DID IT START?

ANSWER . . . (To Question on P. 186)

The name was International Motors until Durant, on the manufacturing side and the Morgans on the financial side, disagreed over legal technicalities. Then, it is reported, Perkins of J. P. Morgan Co. sent a message to Durant telling him that he couldn't use the name International Motors, as he, Perkins, had been the one to suggest it. Durant just reached for a pencil, crossed out the word "International" from some letterheads on his desk and wrote in "General."

(Another Cartoon Quiz is on P. 192)



GATKE
Custom-Bilt
BRAKE BLOCKS and LINERS
for Cars • Buses
Trucks • Tractors
Trailers and all
other equipment

There are plenty of reasons why Loggers, Contractors, Motor Freight Lines, Bus Lines and other Fleet Operators prefer GATKE *CUSTOM-BILT* Brake Blocks.

They have extra values created thru years of development leadership.

Give smooth, non-grabbing action for SAFE, dependable stopping with reduced strain on driver and equipment.

Retain their efficiency on steep hills and long grades.

Give longer service and keep equipment rolling with fewer adjustments.

RESULTS TALK. Just use GATKE Brake Blocks for your next five relines and see the improvement.

Ask your GATKE Jobber or write.

Gatke CUSTOM-BILT BRAKE LININGS
BLOCKS SETS ROLLS SHEETS
GATKE CORPORATION
228 N. La Salle St., Chicago 1, Ill.

New Products

(CONTINUED FROM PAGE 189)

Transpo is non-corrosive to aluminum, magnesium, cadmium plate, steel, zinc, cast iron, and tin-plate. The material is said to have exceedingly long tank life.

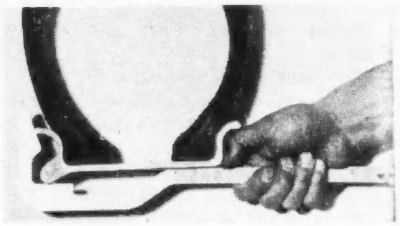
Use Free Postcard For More Details.

P205. Rim Size Gage

The National Wheel and Rim Assn. has recently announced a patented Rim Size Gage, known as the NWRA No. 1000, which represents a development made necessary by the introduction of new truck rims, sizes and designs, adopted as Standard for the automotive industry both during and since World War II.

The gage, stamped of aluminum, is readily applied to all demountable rims and demountable wheels, without removing the tire and tube from the rim assembly and without removing the demountable rims or demountable wheels from the vehicle—except in the case of rear duals where the spacer band between the rims interferes with the proper application of the Gage. In this exception, the demountable rim must be removed from the dual assembly to apply the Gage.

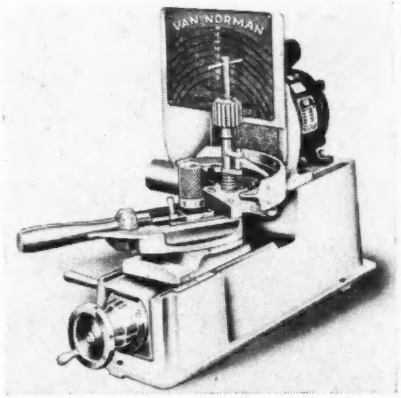
A scalloped-type Gage, originally introduced by the National Wheel and Rim Assn., about 10 years ago, is now obsolete and might lead to an incorrect size determination if continued in use—particularly on rims to which have been applied the new type Interim Rings.



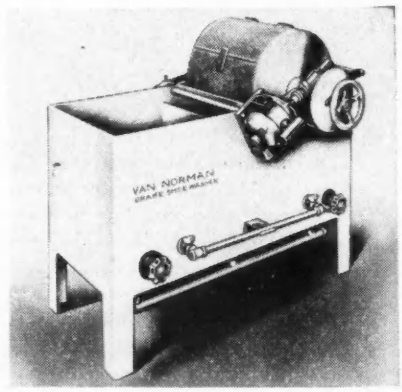
Use Free Postcard For More Details.

P206. Shoe Burnisher

The Van Norman Co., Springfield, Mass., is introducing a brake shoe burnisher, No. 350, designed to overcome the variations which naturally occur in the manufacture of brake shoes and brake blocks.



This machine precision grinds brake shoes to standard of oversize drum diameter, handling shoes 16 x 4 in. and micro-sizing the shoe to the drum. Operation is said to be low in cost, with 10-in. disc driven by a ½-hp. motor. Equipped with a dry-type, built-in dust exhaust system, the machine has the added convenience of instant location, center or off-center. Ramps can be ground conveniently at each end of the lining segments.



Another machine, No. 350, Brake Shoe Washer, is said to do the job of washing brake shoes, BK booster units and other small and medium-sized metal parts in ¼ of the usual time, saving nearly 1½ hours over the old method of vat-soaking shoes.

Use Free Postcard For More Details.

(TURN TO PAGE 192, PLEASE)

A *NEW* TOOL TO ADD TO YOUR PREVENTIVE MAINTENANCE KIT

The

MOTORSTAT

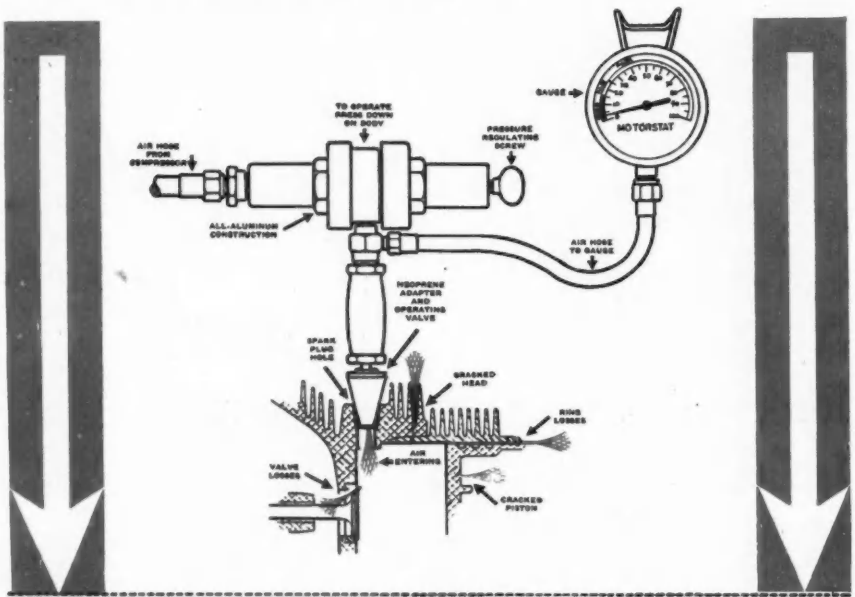
The service manager responsible for the perfect functioning of the engines in the fleet should be able to know in advance that certain parts are beginning to show signs of wear, so he can judge whether to service them immediately or book them for servicing at an early date.

The *MOTORSTAT* Engine Condition Testing Gauge is a perfect instrument for *PREVENTIVE MAINTENANCE.* By introducing a constant quantity of air under pressure into an engine, with the valves in the closed position, it accurately measures the leakage of this air past any cylinder part or seal.

It is small enough in size to reach any engine cylinder from which the spark plug can be removed.

This gauge fills the wide gap between the makeshift hand testing and the complex performance of a dynamometer.

Mail coupon today for further details and price list.



F. T. GRISWOLD MANUFACTURING CO.
305 W. Lancaster Ave., WAYNE, PA.

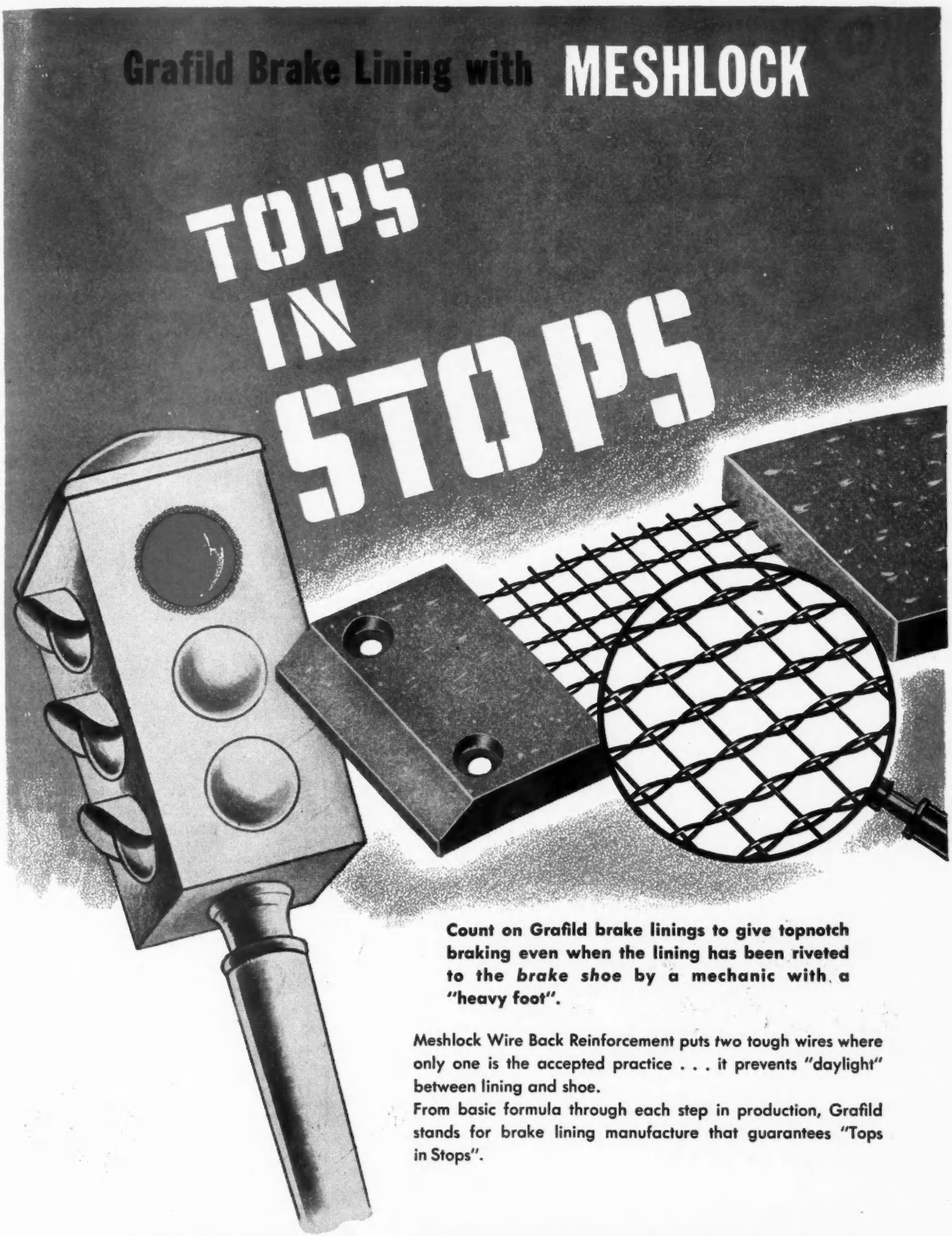
Please send descriptive matter and price list of The MOTORSTAT Engine Condition Testing Gauge.

NAME (please print) .....

ADDRESS .....

Grafild Brake Lining with MESHLOCK

TOPS IN STOPS



Count on Grafild brake linings to give topnotch braking even when the lining has been riveted to the *brake shoe* by a mechanic with a "heavy foot".

Meshlock Wire Back Reinforcement puts two tough wires where only one is the accepted practice . . . it prevents "daylight" between lining and shoe.

From basic formula through each step in production, Grafild stands for brake lining manufacture that guarantees "Tops in Stops".

WORLD BESTOS CORP.

NEW CASTLE, INDIANA

New Products

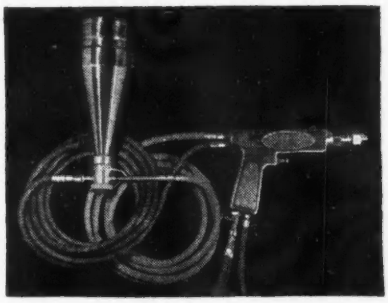
(CONTINUED FROM PAGE 190)

P207. Spraywelder

A new-type powder metallizing unit known as the Colmonoy Spraywelder, has been developed by Wall Colmonoy Corp., Detroit, for use in conjunction with the Colmonoy Sprayweld Process. With this new unit it is said to be possible to combine the advantages of both welding and metallizing procedure. The unit is operated in the first part of the process as a powder metallizing unit to apply a uniform overlay of hard-facing alloy. It is then used as a conventional welding torch to fuse this sprayed overlay to the base metal to obtain a fusion or molecular bond, identical to that obtained when the same alloy in rod form is applied by acetylene welding.

The new unit is unusually simple and dependable. There are only two control valves, both being mounted on the gun itself. Once adjusted, the powder flow may be stopped and started at will by pressing or releasing the trigger. The gun is light in weight and well balanced. It may be hand operated, or held in a vise or with an attachment in the tool post of a lathe.

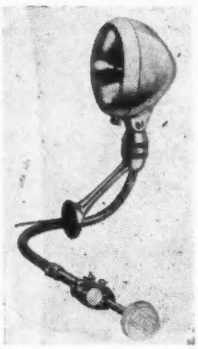
The Spraywelder unit consists of the gun, all necessary hoses, with connections. The hopper for the powdered metal and the carburetor are combined in a single



unit. In addition a panel to hold all the equipment is provided.

Use Free Postcard For More Details.

P208. New Spotlight



One of the newest advancements in spotlights is now being offered to the fleet field by the Arnolt Motor Co., Warsaw, Ind., in the form of a remote control lamp which is mounted on the right hand side of the cab and controlled from the driver's seat.

The new spotlight, Ivalite, is said to combine flexibility of mounting with flexibility of control. The driver is able, by turning one control knob, to turn the lamp in a continuous circle, as well as up and down, throwing a beam of light ½ mile long.

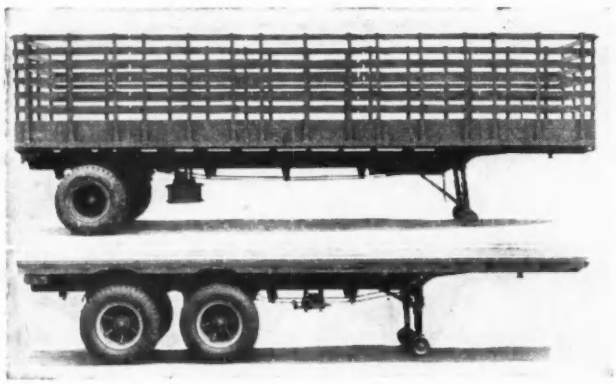
The unit has chromium finish, weighs approximately 50 lb. and is available for 6 to 8 and for 12 to 16-volt bulb equipment. It is equipped with a new Mazda sealed beam spotlight unit and is also available for overhead control for roof mounting.

Use Free Postcard For More Details.

(TURN TO PAGE 194, PLEASE)

TRUCK ENGINEERING TRAILERS

VANS
STAKES
FLATS



SINGLE AND TANDEM AXLE TYPES
AVAILABLE IN ALL SIZES AND MODELS



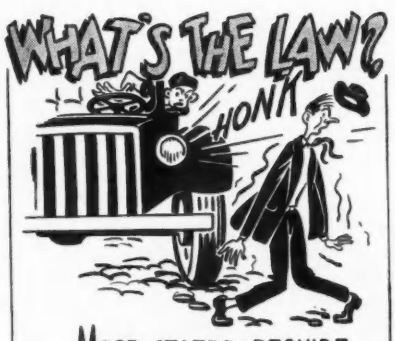
DUMP UNITS
for
BULK HAULING
of COAL and
BUILDING
MATERIALS

TRUCK ENGINEERING TRAILERS are designed to haul maximum payload with minimum dead weight, and provide long life with low maintenance cost. Prompt delivery can be made on standard models.

Some Distributor Territory Available

TRUCK ENGINEERING CORPORATION

CLEVELAND 2, OHIO



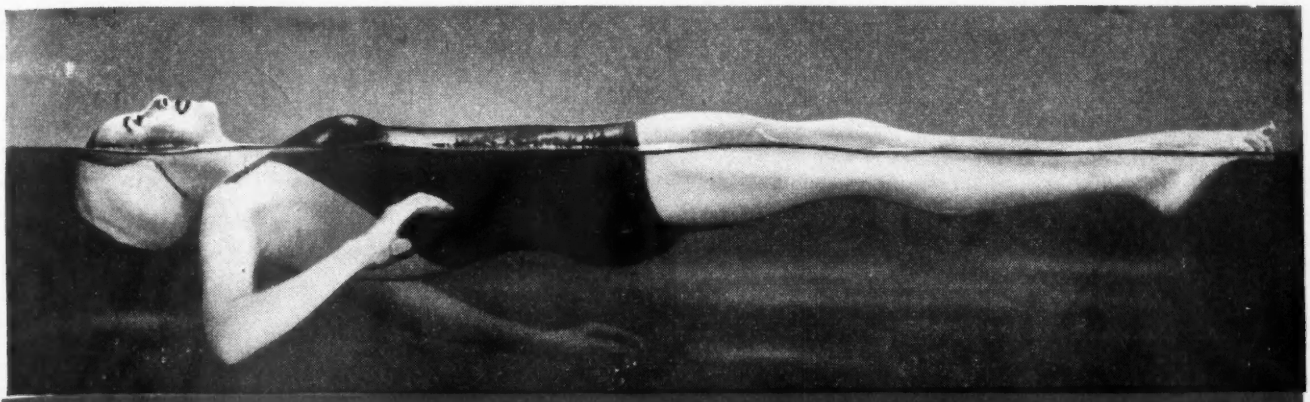
MOST STATES REQUIRE THAT THE HORN ON A TRUCK BE ABLE TO BE HEARD FOR A DISTANCE OF...

☐ 100 FEET ☐ 500 FEET
☐ 200 FEET ☐ 1000 FEET

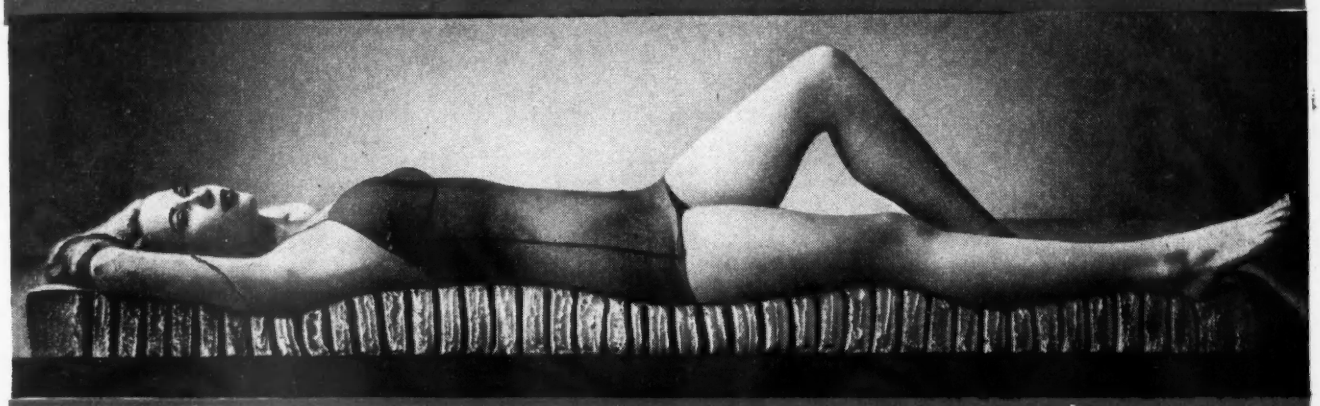
Answer on P. 194

UNITED STATES RUBBER COMPANY

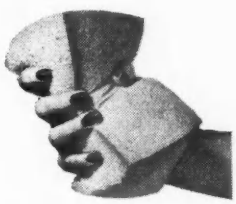
SERVING THROUGH SCIENCE



AS YOU FLOAT ON WATER



YOU "FLOAT" ON U.S. KOYLON FOAM

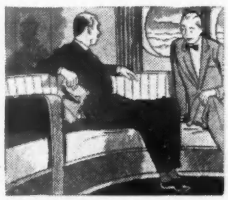


SEE how U.S. Koylon Foam forms to body contours . . . providing gentle but firm upward support in direct proportion to downward pressure. This fluid buoyancy means matchless comfort—the kind of comfort that rests and refreshes.

This matchless comfort is provided by scientifically controlled buoyant air that stays "alive"—never sags or mats. With Koylon, there are no "innards" that need adjustment or replacement. The comfort of this amazing cushioning and mattress material is as permanent as it is economical and easy to install. That's why, wherever people sit or sleep, *it pays to specify Koylon Foam!*



12 years of testing on major railroads prove that comfortable Koylon is long-wearing!



The matchless comfort of Koylon wins and keeps more passengers for modern bus and air lines!



In new cars, the matchless comfort of Koylon helps to lessen driving fatigue. A safety feature!

WHEREVER COMFORT COUNTS, PUT

U.S. *Koylon* FOAM

REG. U.S. PAT. OFF.

Comfort Engineered

U. S. Koylon Foam Division, Mishawaka, Indiana

New Products

(CONTINUED FROM PAGE 192)

P209. Flexible Hose

A new flexible hose strongly reinforced to withstand pressure of 800 lbs. per sq. in. has been developed by United States Rubber Co. for use on high-pressure auto washer equipment.

The hose is constructed with a synthetic rubber tube specially compounded to resist hot water, soapy solutions and chemicals used to clean cars. It is reinforced with two plies of Ustex, a chemically-treated, high-strength textile. The cover is made of synthetic rubber to resist oil and grease encountered on garage floors.

The hose will be made in three sizes—⅜, ½ and ¾-in. I. D.

Use Free Postcard For More Details.

P210. Lock Nut

A new self-locking wing nut, featuring a red elastic nylon locking collar, has been produced by Elastic Stop Nut Corp. of America.

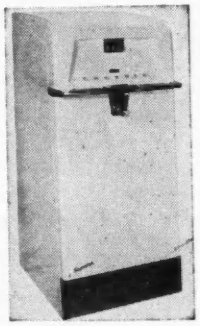
The wing nuts are made available in four diameters with both fine and coarse threads. Machine screw sizes, in fine threads, are 8/36, 10/32 and 12/28, with the fractional size of 1/4-28. Coarse thread sizes are 8/32 10/24 and 12/24, in addition to 1/4-20.

ESNA wing nuts are made of die-cast zinc, with all nuts in regular production supplied in plain finish. Nickel plating can be furnished on special order.

Use Free Postcard For More Details.

P211. New Lubricators

Many innovations have been made in exterior design and practical features of operation and use in the new Aro 1947 "Supreme" line of cabinet and wall type lubricators. Although hoses, nozzles, meters, funnels and pumping units are fully concealed when not in use, they are instantly and conveniently available when needed.



Indirect illumination to accent the various services offered is available on cabinet models; and on wall type models, an electric sign having a traveling "belt" carries a sales message of up to 60 letters, easily read as the word travels across the line of vision. This feature can be incorporated as ordered.

Use Free Postcard For More Details.

P212. Heavy-Duty Cable

A Bulldozer Tenton All-Purpose Cable just announced by the Wire & Cable Division, Wind Turbine Co., West Chester. Pa., while only one-fifth of the weight of chain of equal strength, has a minimum breaking strength of 20,000 lb. Made of flexible wire rope, it is said to handle 4000-lb. loads safely under all towing conditions, according to the manufacturer.

The special heat-treated aluminum alloy thimbles and the Pres-Tite cable connectors holding them, are rustless. These cable connectors eliminate the more undesirable features of a splice as each thimble will fit through the other, thus permitting the cable to be used either as a slip noose or as an ordinary tow cable, hooking over standard towing attachments.

The Bulldozer Tenton comes in standard lengths of 10, 12, 15, 20, 25 and 35 ft. The cable is ½ in. 6 x 19 improved plow steel wire rope, galvanized against rust.

Use Free Postcard For More Details.

(TURN TO PAGE 196, PLEASE)

FEL-PRO Black Steel Copper!
HEAD GASKETS



Yours Is A Complete Choice When You "CALL FOR FEL-PRO"

As you know, some cars come equipped with Black Head Gaskets ...some with Steel...and the most with Copper. Whichever type you want to use on a job...whether to match original equipment or because of your own preference... Fel-Pro has it. All are precision made—Tops in construction and performance dependability.

These Fel-Pro Head Gaskets—Black, Steel or Copper—are available individually, or better still as part of FULL Gasket Sets for all popular makes and models of cars and trucks.



FEL-PRO tect

Full Gasket Sets, Packings, Grease Retainers

FELT PRODUCTS MFG. CO.
1520 Carroll Avenue • Chicago 7, Illinois

STOP Every "Drip" and Keep Him STOPPED . . . USE FEL-PRO!

● WHAT'S THE LAW?

ANSWER... (To Question on P. 192)

200 feet is the usual provision for audibility. This is the requirement in 32 states. In Louisiana it is 600 feet. Other states require a horn that is suitable and adequate without specifying distance. Oklahoma is the only state that does not make a horn mandatory.

(Another Cartoon Quiz is on P. 196)



MAIN BEARINGS . . . right down in the heart of the motor . . . need "measured tensioning" to fulfill their function properly. A Snap-on Torqometer does the job accurately . . . eliminates "guesswork" . . . and gives you "factory-pressure" every time. You eliminate dangerous distortion because you *know* the tension to the exact foot-pound.

Snap-on Torqometers should be used not only on main bearings, but on cylinder stud nuts, connecting rods, clutch assemblies, flywheel nuts, etc. Simply set the dial at the tension required and tighten 'til the pointer reaches zero. "It's as easy as reading your watch."

Sizes from zero to 30 in. lbs., up to 2,000 ft. lbs. Available through Snap-on's nationwide, direct-to-user tool service. "Ask your Snap-on man" . . . or write for free copy of Snap-on's car and truck tension chart . . . and the new complete catalog of 3000 Snap-on tools.

SNAP-ON TOOLS CORPORATION
8026-D 28th AVENUE • KENOSHA, WISCONSIN

New Products

(CONTINUED FROM PAGE 194)

P213. Brushless Paint

Sleek, a new brushless paint which is applied with an ordinary lint-free cloth in preference to a brush, has been developed by the Miler Corp., Chicago. Because it is wiped on rather than brushed on, speed of application is said to be increased and very little experience is necessary for using it. The product dries ready-for-use, under normal atmospheric conditions, within one hour.

Use Free Postcard For More Details.

P214. Valve Gage

A new valve inspection gage has just been announced by the Demay Gauge Co., 20522 Chalmers Ave., Detroit, Mich.

Designed for use in motor reconditioning shops to simplify the process of valve inspection, the "True" Valve Gauge consists of two shaft-mounted hardened Vee blocks, adjustable to valve length, and a dial indicator which can be placed to measure valve stem straightness or valve seat runout. A Federal dial indicator graduated to .0005 in. is used and can be easily removed with its clamp for other inspection work.

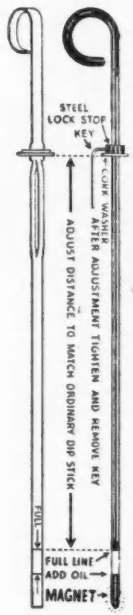
This model will accommodate valves up to 10 in. long and head diameters up to 3 in., with special models available for larger valve sizes. Useful for analyzing valve failures, it will also find bent valve stems, bent seat grinding pilots, improperly ground valve seat faces, and will grade valves to length.

The gage is plated for protection from corrosion and is supplied in a durable wooden box for storage. Tapped holes are provided in the underside of the legs for bench mounting.

Use Free Postcard For More Details.

P215. New Dip Stick

Magnet-On, a permanently magnetized oil dip stick, is now being manufactured by the O. B. Briggs Mfg. Co., Toledo. An Alnico permanent magnet, at the base of the stick, attracts ferrous metal particles in the oil and they are held by the magnet. When the stick is removed and wiped off preparatory to measuring the oil level, the particles adhering to the magnet are also wiped off.



The stick is made of Bundy steel tubing with red top finger lift and red bottom. From low oil level to full is marked by white enamel between the two knurls. An adjustable lock-stop near the top permits the stick to be calibrated to exactly the same readings as standard equipment gage.

Another feature of the dip stick which will appeal to mechanics is that it can be used to retrieve nuts, bolts, metal washers and other small parts dropped into inaccessible places.

Use Free Postcard For More Details.

(TURN TO PAGE 200, PLEASE)

a Tale about

TANDEMS

● Thousands of successful installations support the 20 year experience record of the Hendrickson Tandem—*prove our basic design.* Installations for semi and full trailers, trailing axle and four wheel drive six-wheelers, and many types of special equipment attest the varied application permitted by our proven design.

The Hendrickson Tandem offers a full range of sizes . . . extending from 22,000 lbs. to 60,000 lbs. rated capacity. We submit our record of experience and leadership as proof of the best in tandem design and construction.



HENDRICKSON MOTOR TRUCK COMPANY
Wabash Avenue at 36th Street
CHICAGO 15, ILLINOIS

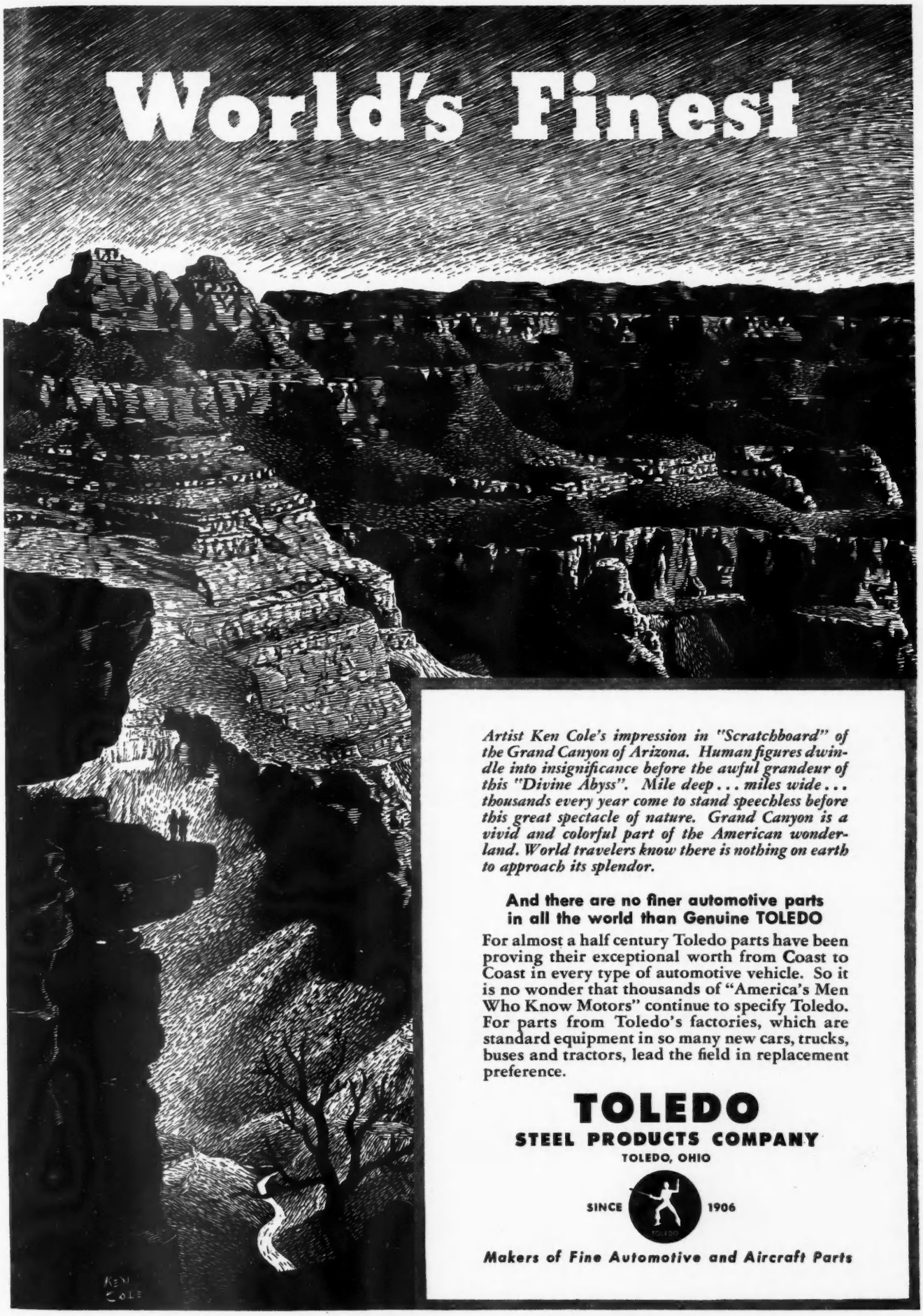
"Follow the Leader"



THE LAST RAILROAD IN THIS LAND OF PINEAPPLES WILL BE REPLACED BY MOTOR TRUCKS BEFORE THE END OF THE YEAR.

☐ HAWAII ☐ JAMAICA
☐ CUBA ☐ PUERTO RICO

Answer on P. 200



Artist Ken Cole's impression in "Scratchboard" of the Grand Canyon of Arizona. Human figures dwindle into insignificance before the awful grandeur of this "Divine Abyss". Mile deep . . . miles wide . . . thousands every year come to stand speechless before this great spectacle of nature. Grand Canyon is a vivid and colorful part of the American wonderland. World travelers know there is nothing on earth to approach its splendor.

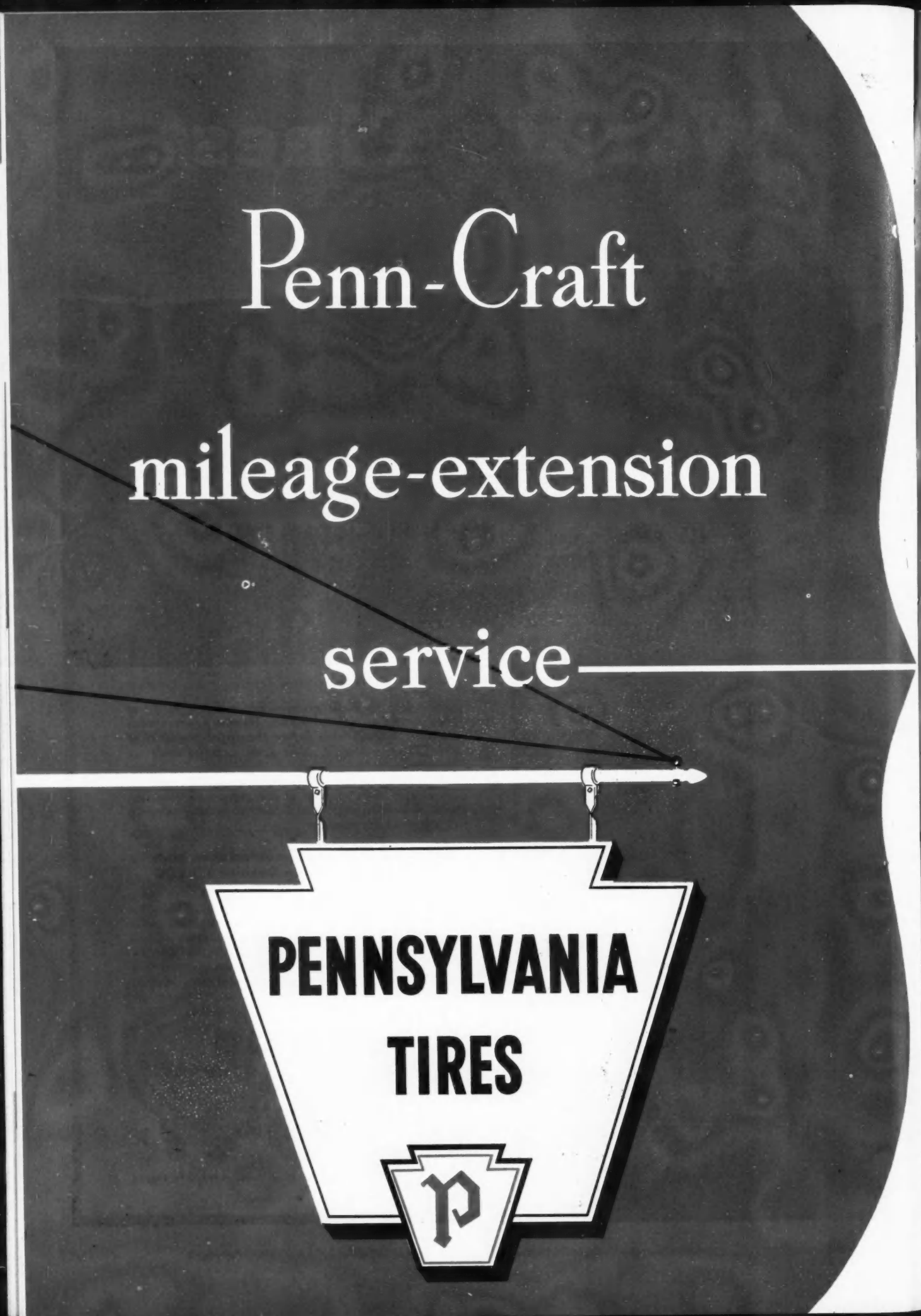
And there are no finer automotive parts in all the world than Genuine TOLEDO

For almost a half century Toledo parts have been proving their exceptional worth from Coast to Coast in every type of automotive vehicle. So it is no wonder that thousands of "America's Men Who Know Motors" continue to specify Toledo. For parts from Toledo's factories, which are standard equipment in so many new cars, trucks, buses and tractors, lead the field in replacement preference.

TOLEDO
STEEL PRODUCTS COMPANY
TOLEDO, OHIO

SINCE 1906

Makers of Fine Automotive and Aircraft Parts


Penn-Craft
mileage-extension
service
PENNSYLVANIA
TIRES
P

PENNSYLVANIA ALL-TRACTION TRUCK TIRE. Equally powerful traction in either direction, forward or back. Especially designed for on and off the road service. Quiet, tough, long wearing.

PENNSYLVANIA TURNPIKE TRUCK TIRE. All sizes from 600 x 16 to 1200 x 24. Proved superior on long distance runs under severe load and speed conditions. Dual tread provides extra long mileage.



means *Specialized Service to Truckers!*

Road service, not lip service, is the backbone of every Pennsylvania dealer's relationship with his truck tire accounts. Like the *doctor of transportation* he is trained to be, he is always "on call". So tell your drivers. The PENNSYLVANIA dealers along your route *won't let you down* when you go down. When ever you need tires or tire service, head for the PENNSYLVANIA keystone, it's headquarters.

PENNSYLVANIA

PENNSYLVANIA RUBBER CO. . . . JEANNETTE, PENNA.

49 years of successful business through successful dealers

New Products

(CONTINUED FROM PAGE 196)

P216. Booster Valve

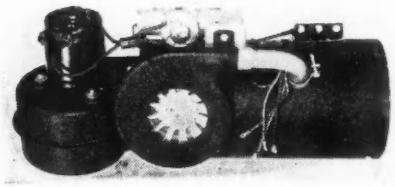
A Universal Booster Control Valve is announced by Universal Lubricating Systems, Inc., Oakmont, Pa. Attached at the working end of the grease hose line, the booster features a compounding action that increases the grease pressure from 2 to over 4 times, merely by squeezing the control handle. Pressure is increased in the control valve and at the fitting—not in the hose line.

Tests show that the valve will boost pressure of 1500 lb. up to 7000 lb., 5000 lb. up to 12000 lb., 8000 lb. to 16000 lb., to eliminate the need for excessive hose line pressures. It prolongs life of expensive high pressure hose, air compressors and pumps by allowing lower working pressures in the line itself, at the same time delivering the desired high pressure at the fitting; the addition it is said to reduce time needed to properly lubricate cars, engines, trucks and tractors, and other equipment and saves on amount of lubricant used up to 44 per cent, by eliminating waste and overflow.

Use Free Postcard For More Details.

P217. Under-Hood Heater

A new gasoline heater designed to mount under the hood, thus clearing the interior of the vehicle from any obstruction is announced by South Wind Division of Stewart Warner Corp., Indianapolis. The



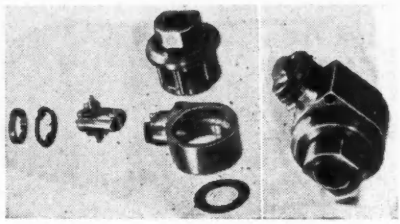
unit features a fresh air intake, powerful blower, completely automatic thermostatic control, and almost instantaneous heat. It operates independently of the engine and provides 100 cu. ft. of warm air per min. May be mounted in any type vehicle.

Use Free Postcard For More Details.

P218. Circuit Breaker

A new type circuit breaker to replace the conventional breaker points in the distributor body has been developed by C V C Industries, St. Louis, Mo.

Among the features claimed for the unit are: new point performance at all times; 90 per cent coil saturation; 20 per cent increase in gasoline consumption; 15 per cent increase in horsepower; long life; and increased engine efficiency.

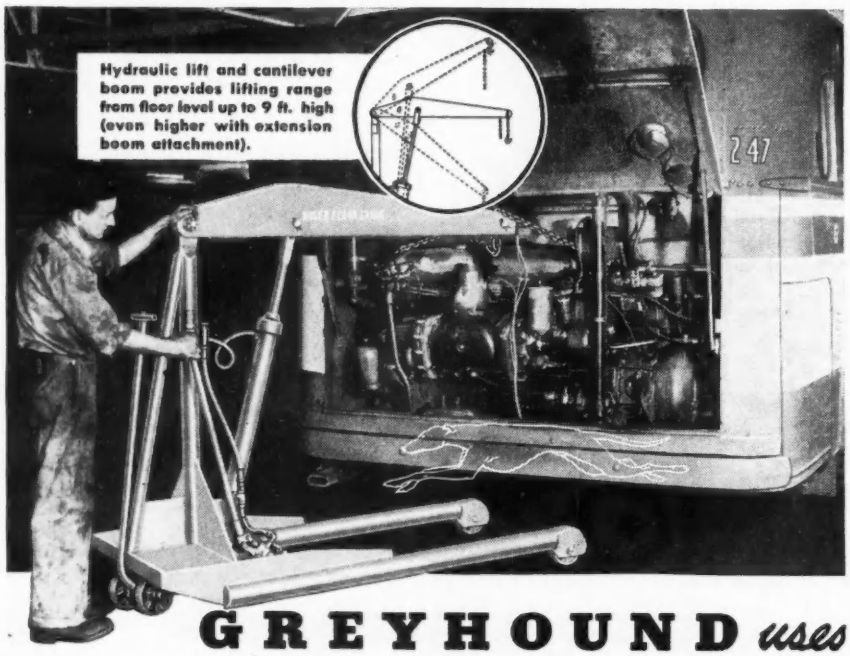


Many of these features are a result of the controlled volume contact in the new unit. The mechanism is entirely enclosed so that oxidation and point burning is reduced. The circuit breaker uses a precision coil spring with 9 lb. pressure which operates a plunger, converting rotating motion to in-and-out piston action and resulting in reduced point bounce, according to the manufacturer.

These units are adaptable to all models of trucks, simply by replacing the points with this new unit.

Use Free Postcard For More Details.

(TURN TO PAGE 202, PLEASE)



GREYHOUND *uses* RUGER *Hydraulic* Floor Cranes!

Keeping up-to-the-minute with modern time-saving shop equipment is one key to the efficiency of Greyhound's maintenance program. Typical is the purchase and use of Ruger Hydraulic Floor Cranes for removing and installing motors, motor heads, generators and other heavy parts and assemblies.

On jobs like these the Ruger does work no other equipment can do . . . reaches over, under and into tight places to lift, lower and move heavy loads in and out . . . makes it easy to spot and hold heavy parts accurately for installation. Frequently use of the Ruger saves a complete tear-down to remove and install parts and assemblies in inaccessible locations.

Every garage and maintenance shop needs the Ruger, for the Ruger quickly pays for itself by the time and money it saves...sometimes in the first thirty days. Built in 1-ton, 2-ton and 3-ton sizes, also a stubby model for bus motor work.

Mail coupon *today* for your free copy of the new Ruger Bulletin. Address nearest office listed below.

RUGER *Equipment Co., Inc.* 408 Leader Building Cleveland, 14, Ohio

P. O. Box 3821, Portland 8, Ore.

Please send free copy of new Ruger Bulletin to:

Your Name_____

Company_____ Address_____

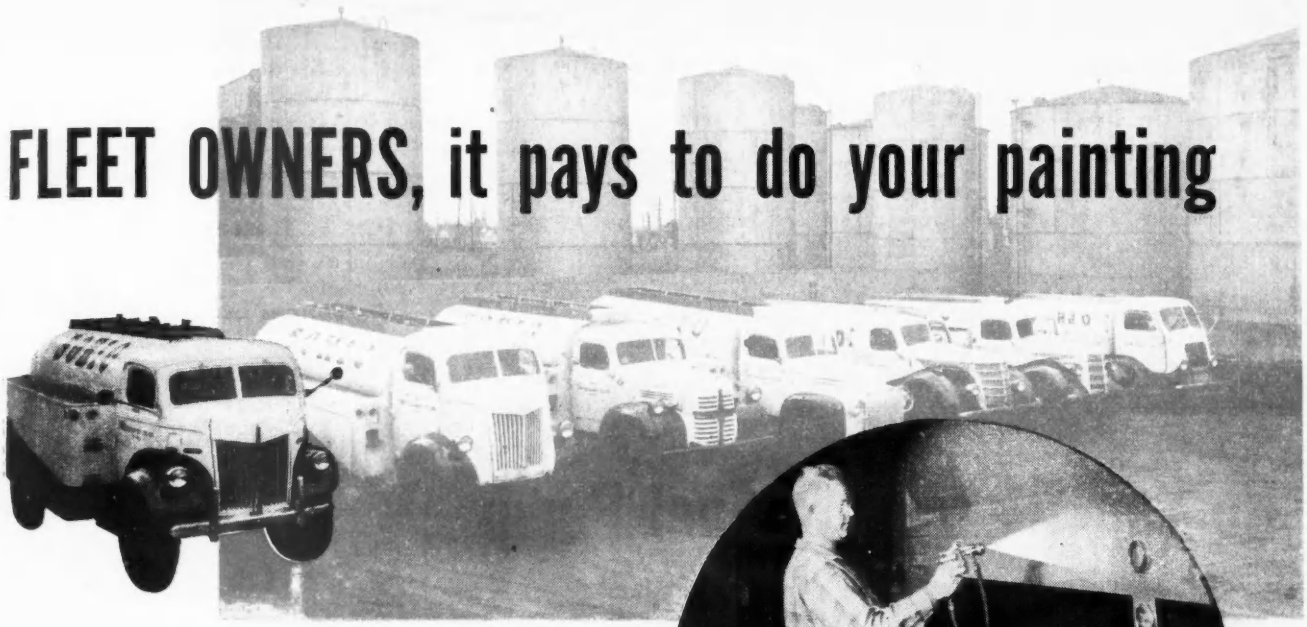
City_____ State_____

● WHERE'S HOMER?

ANSWER . . . (To Question on P. 196)

By the end of 1947, Hawaii's biggest railroad, Oahu Ry. & Land Co., will have abandoned its 85 miles of track for a new million dollar trucking corporation. The road told the I.C.C. that "development of highway truck transportation has now made railroads non-essential."

FLEET OWNERS, it pays to do your painting





in a completely equipped DEVILBISS Paint Shop...

You can establish a systematic painting program for better fleet appearance and do jobs better, faster and less expensively with DeVilbiss Spray Equipment.

A completely equipped DeVilbiss Paint Shop provides production line speed in all painting operations. A segregated painting department with exhaust and lighting specifically designed for spray work assures top quality finishes—saves valuable manhours in sanding and polishing. A broad assortment of spray guns provides for fast, high-quality touch-up, complete refinishing or underbody coating work.

Regular paint conditioning of your trucks and cars is good sound business practice—especially when it's done in a Completely Equipped DeVilbiss Paint Shop.

THE DEVILBISS COMPANY • Toledo 1, Ohio
Canadian Plant: WINDSOR, ONTARIO

Here's Why

- With a DeVilbiss Paint Shop in your own garage—at your disposal for immediate *prompt* service there's no waiting—no delay.
- Many paint jobs can be performed while other mechanical repairs are taking place on the vehicle in your shop.
- You can keep your trucks looking more attractive and get them back on the road with less loss in freight revenue.

DE VILBISS

means **Quality** *in all four..*

SPRAY EQUIPMENT
EXHAUST SYSTEMS
AIR COMPRESSORS
HOSE & CONNECTIONS

New Products

(CONTINUED FROM PAGE 200)

P219. Spotlight

A new industrial spotlight is now available designed for use over bench grinders, lathes, drill presses, and other shop equipment is announced by Main Electric Co., Inc., Rochester, N. Y. The light consists of a steel shell into which has been mounted a key-type socket. The front end of the shell contains a lens which concentrates the light directly where it is required. Louvres, both top and bottom, provide adequate ventilation while internal shields prevent stray light from showing through the louvres. The light is mounted on a ball socket joint which will hold in any position.

Use Free Postcard For More Details.

P220. Parts Cleaner

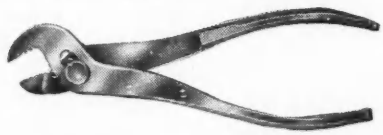
Developed by Kelite Products, Inc., Los Angeles, Formula 555, a fast and safe degreaser and decarbonizer, penetrates carbon and removes desposits by cold emersions that were formerly believed impossible. It is said to be efficient in cleaning automotive and diesel engine parts, fuel pumps, carburetors, filter screens, shock absorber parts and brake parts.

Formula 555 contains no phenolic compound and hence is completely safe for the operator. It has a very high flash point and so is safe from fire, and it is completely safe on all metals. It is economical to use because it has a very long life and a built-in-seal, according to the manufacturer.

Use Free Postcard For More Details.

P221. Battery Pliers

An efficient tool for every serviceman's kit is the No. 1044 battery service plier offered by the Whitaker Cable Corp., Kansas City, Mo. It is a 7-in. plier of special Molybdenum steel with pipe wrench jaws

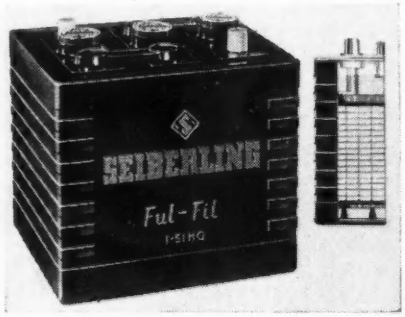


set at a 22-deg. angle to provide a sturdy grip on the most stubbornly corroded terminal. Two-position slip joint is adjustable for easy grip on any size battery part.

Use Free Postcard For More Details.

P222. New Battery

A battery which needs refilling only three times a year in normal service is announced by Seiberling Rubber Co., Akron, O. Known as the Seiberling "Ful-Fil" battery, it has a liquid reserve three times

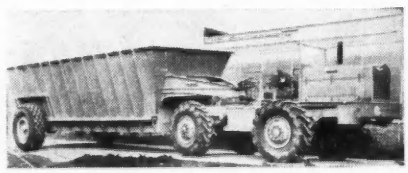


that of a conventional storage battery. Engineering changes permit the increased capacity in a case of conventional size. Other features include the use of fibre-glass insulation and larger power reserve.

Use Free Postcard For More Details.

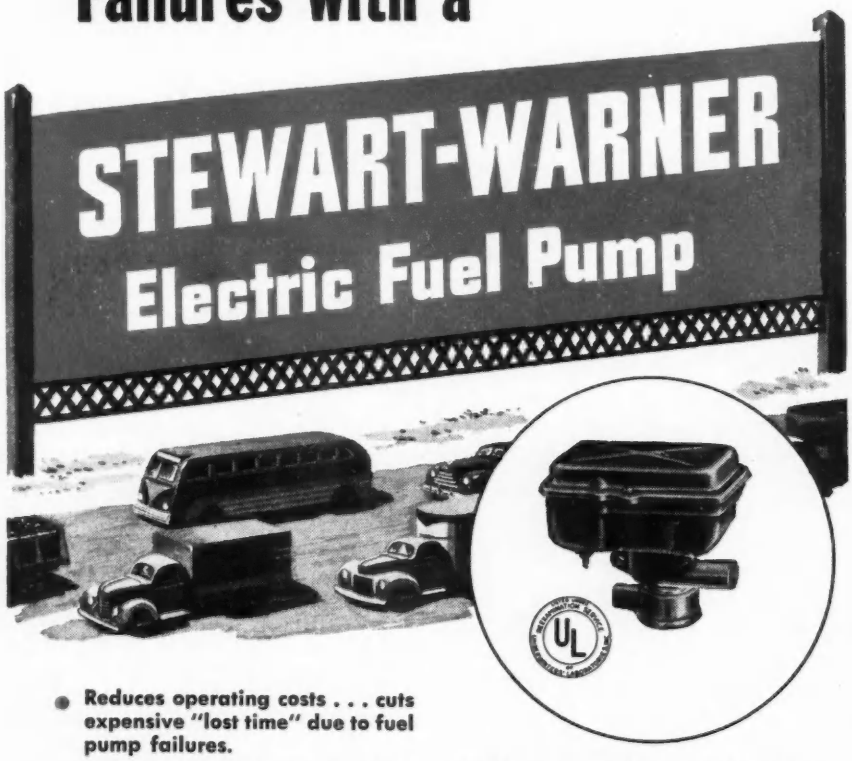
P223. Under Coating

A new rubberized underbody coating has been developed by Nox-Rust Chemical Corp., Chicago. The new protective coat-

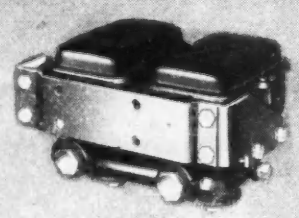


A 200-hp. Oshkosh diesel tractor, and a huge F.A.B. trailer, both equipped with special Goodyear tires, makes up this unique combination for hauling sugar cane in the Hawaiian Islands

No Vapor-Lock! No Fuel Pump Failures with a



- Reduces operating costs . . . cuts expensive "lost time" due to fuel pump failures.
- Helps to maintain tough schedules—insures quick starting in any weather.
- Operates only when needed.
- Delivers a minimum of 15 gallons of gas per hour.
- Available for 6 or 12 volt installations.



110-P DUAL PUMP

Dual fuel pump installations are recommended where gasoline mileage is less than 5 or 6 miles per gallon. Each pump in a dual unit may be wired to a separate switch. By using one pump in a dual unit, 30% greater fuel delivery will result. The idle unit acts as a booster as well as reserve pump. Stewart-Warner Corporation, 1876 Diversey Parkway, Chicago 14, Illinois.

ing, known as "Nox-Rust Sound-Proof," is said to prevent corrosion, eliminate rattles, and cushion noise and abrasion from stones thrown against the body. Applied by spraying over the entire underbody, it is impervious to water, salts and other corrosive chemicals encountered on streets and highways.

P224. Pneumatic Riveter



Fleet operators who do relining of brake shoes in volume will be interested in the new Grey-Rock RG-100 Pneumatic Riveter.

It is of sturdy, streamlined, all-welded construction with 8-in. throat and has no springs. The few moving parts are fitted into bronze bearings, easily lubricated through the use of pressure fittings. It is equipped with pressure control valve and gage.

The valve is so constructed that the ram can be stopped at any position in its stroke. Discharged air returns the piston to its original position. A complete assortment of nine tools made of heat-treated, special alloy steel are furnished with each No. RG-100

Use Free Postcard For More Details.

P225. Cork Gaskets

A line of cork gaskets for most popular cars and trucks is being offered by the Sure-Rite Products Co., Philadelphia. This line, for vehicles as far back as 1928, includes: oil pan gaskets, valve cover gaskets, intake and exhaust manifold gaskets, headlight reflector gaskets, water outlet gaskets, water pump gaskets, fuel pump gaskets, rocker arm gaskets, sheet cork and sheet packing.

Use Free Postcard For More Details.

P226. Safety Tread

Announcement is made of a new non-slip safety product, Foothold Safety Tread, by Behr-Manning, Troy, N. Y. Consisting of a chemically treated cotton fabric, coated with silicon carbide mineral, it is applicable to the numerous points of hazardous footing throughout the trucking industry. The new product is said to insure safe footing through the positive grip of its "sandpaper-rough" surface.

Foothold Safety Tread is supplied in roll or cleat form for "pin-point" application to any hazard areas where there is danger of falling through precarious footing. It can be applied readily to wood, tile, or concrete or metal floors without floor tear-up or department tie-up and can be used immediately after laying. It is completely water-proof, shed-proof, non-inflammable and is resistant to water, grease, oil, alkalies and mild acids.

Use Free Postcard For More Details.



A fleet of Fruehauf trailers rolling between the company's plants at Cedar Rapids and Detroit carry punchy messages such as the one above. Capsule comments such as "Trucks Feed America" are carried front and rear

P227. Metal Putty

A synthetic metal alloy in putty form under the trade name "New Metal" is being placed on the market for use in patching fenders and bodies that have become dented, pitted or perforated. New Metal is applied with an ordinary putty knife or thinned for spraying or brush application and requires no heat. It dries harder than lead and may be filed or sanded to a smooth surface. Manufactured and sold by The Howard Paint Division of the Reconditioning Products Corp., Cleveland.

Use Free Postcard For More Details.

(TURN TO NEXT PAGE, PLEASE)

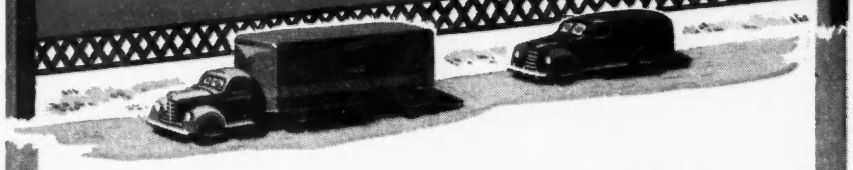
Give Your Drivers This



Visible Check

on The Economy Range*

STEWART-WARNER
Motor-Mile Tachometer



***Every vehicle has an Economy Range—the engine speeds at which it operates with greatest efficiency and economy.**

With a Stewart-Warner Tachometer, the Economy Range is always clearly indicated by stationary red markers on the face dial.

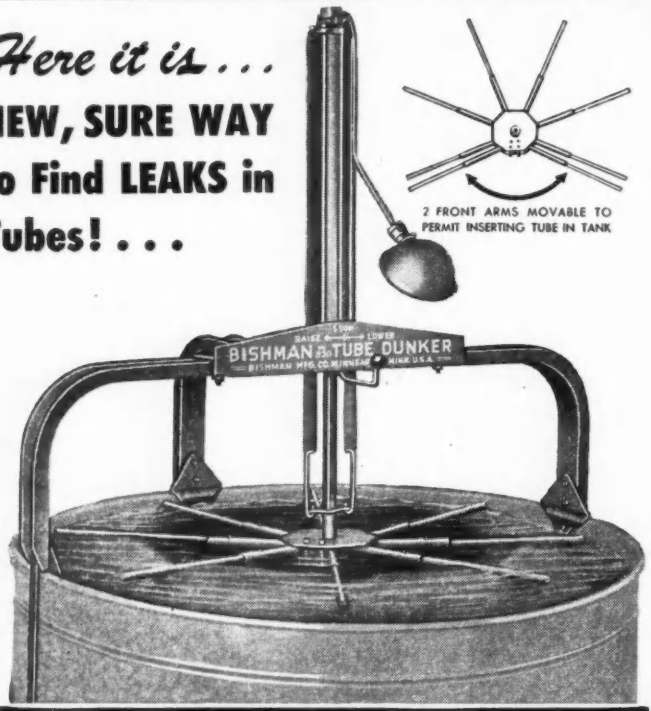
Result: The driver can always keep engine speeds *accurately* within the Economy Range. You save up to 25% on fuel . . .cut oil consumption, too.

Because the Tachometer records all engine revolutions—idling as well as traveling—you have a *controlled* guide which tells you when your vehicle needs servicing. This can cut maintenance as much as 25%!

So install Stewart-Warner Tachometers on *your* fleet. See your Stewart-Warner jobber—or write Stewart-Warner Corporation, 1876 Diversey Parkway, Chicago 14, Illinois.

Here it is . . .

NEW, SURE WAY to Find LEAKS in Tubes! . . .



BISHMAN TUBE DUNKER

NO. 820—AIR-POWERED—ROTATING

Here's what you've wanted for a long time—an EASY, QUICK and SURE way to locate ALL leaks in ALL tubes up to 50" diam., including SYNTHETIC tubes. It will avoid missing leaks—will save time, labor and critical tire mileage.

It submerges an inflated tube COMPLETELY, in a few seconds, holds it steady under water in a level horizontal position, fully visible, with equal air pressure throughout the tube—no bulges! Tube easily rotated in the water for close inspection of any part. Handy built-in light. No need to keep hands in water Two front submerging arms are moveable to permit inserting or removing tube.

AIR-POWER Cylinder operated from your regular air sup ply. With minimum amount of air, it develops pushing power to submerge a big tube. One lever operation—move to right to lower submerging arms, move to center to stop arms at desired point, move to left to raise arms.

Comes Complete with 52" diameter 20 gauge Steel Tank, or without tank. Quickly attached with 3 bolts to any tank from 40" to 52" diameter—adjustable frame and arms. Clamps fit rolled or angle rims on tank. Tank held steady at all times.

Pays for itself in time and labor saved, in avoiding duplication of work and tube damage.

ASK YOUR JOBBER or WRITE FOR DETAILS

BISHMAN MFG. CO., OSSEO 4, MINN.

BISHMAN

Established 1926



New Products

(CONTINUED FROM PAGE 203)

P228. Spray Washer

A new tank-type spray washing machine, available in four sizes, has been designed by the Mabor Co., Rahway, N. J. Parts are lifted into the top of the machine by means of a hoist and an overhead rail. Powerful streams of cleaning solution reach all surfaces of the parts in the tank, and the solution is continuously filtered and the oil separated. The washer is said to utilize only a small amount of solution and relatively little heat. The tank is equipped with a hinged cover and tube hinge, draincock, oil overflow dam, thermometer, removable dirt flow, hand hose and nozzle (for finishing), and complete heating system. It is also completely insulated and can be supplied with thermostat control if specified.

Use Free Postcard For More Details.

P229. Lift Truck

A new light-weight hand-lift truck for loads up to 1 ton is announced by Arcade Manufacturing Div., Rockwell Mfg. Co., Freeport, Ohio. With platform lowered, the truck has ample clearance under a skid-box. An easy pull lifts the load above the wheels, and locks securely. Overall length is 70 in. and the platform area is 11¾ by 43 in.

Use Free Postcard For More Details.

P230. Puller Kit

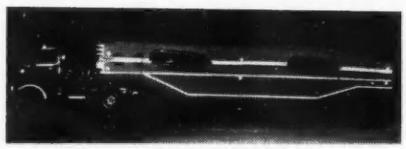
The Grumill Co., Chicago, announces a new all-purpose puller comprising a complete kit of specially designed tools for quickly and easily removing axles, bearings, bearing cups, grease retainers, gears, etc. The kit consists of a sturdy cast steel axle puller, a special attachment for pulling bearing cups, grease retainers, gears, etc., and a supplementary set of puller jaws for the latter which make the device suitable for removing any standard automotive gear except timing gears. All parts are strongly and carefully made, accurately machined and cadmium plated.

Use Free Postcard For More Details.

P231. Cleaning Agent

A new fast-action, hard-carbon dispersing agent which dissolves carbon deposits, varnish, lacquer and sludges, has been developed by Coburn Mfg. Co., Kansas City, Mo. The solvent is said to remove all petroleum residues and to eliminate scrap-

(TURN TO PAGE 206, PLEASE)



Scotchlite, a reflective material made by Minnesota Mining & Mfg. Co., shows up like this when used on one of Boutell Driveaway trailers. It's the same material that is used extensively for night legibility of traffic signs



Steering Comfort Too

IS NEEDED IN HEAVY VEHICLES

GEMMER STEERING

Practically frictionless, Gemmer Steering provides co[illegible] ing, which is so important in heavy vehicles—

Important, because an overtired driver can't work as fa[illegible] safe—doesn't do the job as well—as one who is protecte[illegible] serious fatigue. Comfort pays in work done and in greate[illegible] More people steer the Gemmer way than any other. G[illegible] pioneered easy steering for all types of vehicles, with the [illegible] teeth that roll—liberal use of antifriction bearings.

The design is inherently sturdy—stable—banishes lost motion—reduces wear to least possible minimum. Steering is always firm, responsive, positive, with absence of rubbery feeling or wander. Compactness provides easy installation—saving of weight without sacrifice of overall capacity or steering arm angularity. A Gemmer Steering Gear with Reasonable Care Should Last and Give Satisfaction for the Life of the Vehicle.

STEER THE GEMMER WAY

1575

GEMMER MANUFACTURING CO. 6400 MT. ELLIOTT DETROIT 11, MICH.

New Products

(CONTINUED FROM PAGE 204)

ing and buffing. Directions for use are simple: submerge in warm solvent, agitate, and flush with warm water. It is used with an agitator and leaves a protective film against rust.

Use Free Postcard For More Details.

P232. Plastic Finish

A brushless plastic finish which hardens to form a brilliant, durable, new surface, has been announced by the Reyam Plastic Products Co. of Chicago.

The new plastic is wiped over the car with a cloth, no rubbing, no brushing. The job of refinishing a vehicle can be completed in about 30 min.

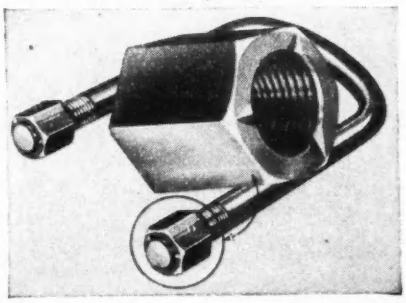
The new finish touch dries in 10 min. and hardens in about 6 hrs. to form a hermetically-sealed film, guarding against corrosion, moisture, chemical deterioration and other destructive forces, according to the manufacturer.

The metal grilles, hub caps, lamps, metal or rubber running boards, moldings, steering wheels, white wall tires, leather upholstery and interior trim can all be refinished with the new product.

Use Free Postcard For More Details.

P233. U-Bolt Nuts

An improved-type self-locking Gripco U-bolt nut is being offered for trailer, truck, bus and car leaf spring fastenings, by the Grip-Nut Co., Chicago. A patented



triangular deflection of the upper thread of this nut provides a positive friction-locking action on the bolt threads that will not shake loose, even under the most severe shocks or impacts, according to the manufacturer. Moreover, the Gripco U-bolt nut can be removed and used over and over again.

Use Free Postcard For More Details.

P234. Sanding Discs

A new line of high quality sanding discs is offered by Aristo Power Tools, Inc. Tough, sharp-cutting aluminum oxide grit is used exclusively, resin-bonded to a vulcanized fibre backing which assures maximum possible adhesion. The discs are said to retain their shape and remain flat on the pad yet are pliable enough to meet all contour sanding requirements. Available in both 7 and 9⅛-in. diameter sizes and in all standard grit densities. For use on all types of flexible shaft and portable disc sanders.

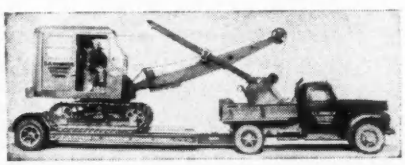
Use Free Postcard For More Details.

P235. Universal Joint

The Gear Grinding Machine Co., Detroit, announces a new type of constant velocity universal joint designed primarily for heavy-duty high angle propeller shaft applications on motor buses and trucks. Tests show entire freedom from torsional vibrations at all operating angles and speeds, according to the company.

In the new Geargrind joint the transmission of torque from driving to driven member is through steel balls, positioned in intersecting race ways. The driving members are positioned by a heavy ball socket

(TURN TO PAGE 208, PLEASE)



Tagalong Frontloader is the appropriate name of this new front-loading equipment trailer offered by Roger Brothers Corp., Albion, Pa., in 10, 15 and 20-ton capacities. Drawbar is raised and lowered through an ingenious hook-up with the dump body hoist of the truck. A positive safety pin assures rigid connection at truck speed



Winter leaves truck motors all off-key—full of sluggish sludge that forms so fast in colder weather. Now, before warm weather bakes dirt in—remove the gum, restore the hum with MARVEL MYSTERY OIL.

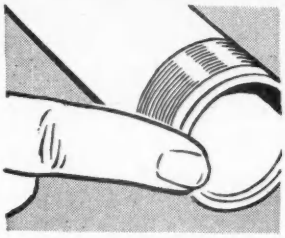
Add MARVEL to oil in every crankcase—and to all gasoline. MARVEL peels the sticky varnish coat off valves and cylinder walls. It purges pump screens, unclogs ring slots, scrubs out feed lines—restores that new-truck sparkle throughout the entire motor.

Then, MARVEL goes still further . . . clean, sludge-free surfaces are filmed with wear-resistant armor. MARVEL toughens film strength—holds up where weaker lubricant folds up . . . in sizzling top-cylinder zones.

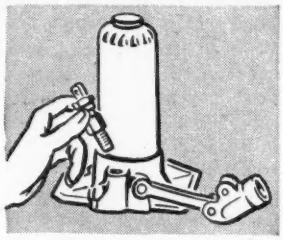
Tune up with MARVEL MYSTERY OIL this Spring. Pack extra pickup, pep and power in every payload unit. Reduce repairs. Order money-saving MARVEL from your Jobber TODAY! Emerol Manufacturing Co., Inc., 242 W. 69th St., New York 23, N. Y.



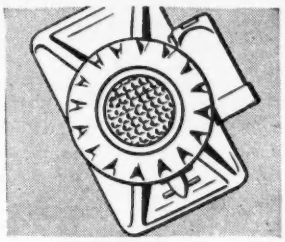
MARVEL
MYSTERY OIL



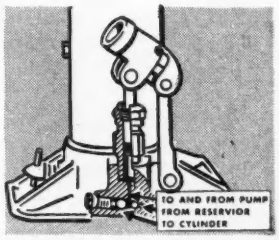
1. LESS WEAR — LONGER LIFE! Exclusive Blackhawk process creates "mirror finish" on cylinders, reduces cup wear.



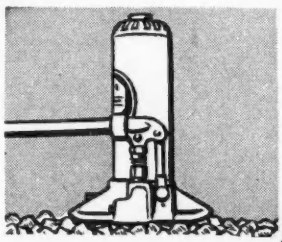
2. LONGER PUMP LIFE! Pump housing is not a casting but a smoothly machined steel cylinder. Reduces wear. Easily replaced.



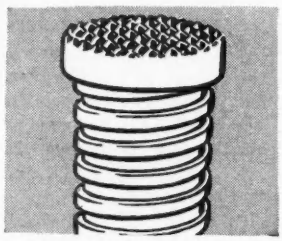
3. TIP-PREVENTION! Load is automatically centered and distributed evenly over base because plunger is dead center.



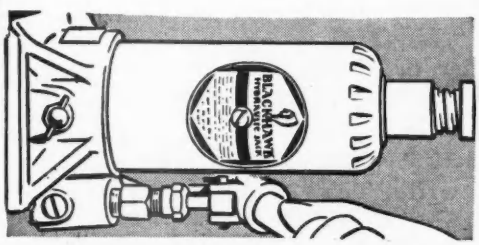
4. EASY MAINTENANCE! All valves under one cap screw (see cutaway). No dismantling of jack to clean valves.



5. POSITION MORE EASILY! Sled-type base "skiis" over uneven ground or floor for quick placement under load.



6. PERMANENTLY SHARP, sure-grip heat-treated saddle. Serrations cut by machine (not cast or forged).



7. FULL POWER ON THE SIDE! Original Blackhawk pump-on-side feature permits horizontal floor-level operation. Handle extends outward, not down!

Big Reasons why BLACKHAWK HAND JACKS GIVE YOU MORE FOR YOUR MONEY

Outward appearance is not the only indication of a jack's performance. It's the BASIC inner-difference in Blackhawk's design that assures you of continuous, safe, dependable performance in every emergency. When you need a jack — buy the best — buy a "Service Proved" Blackhawk from your Blackhawk Jobber.

A Product of **BLACKHAWK MFG. CO.,** Dept. J11-7, Milwaukee 1, Wis.

This seal is found ONLY on BLACKHAWK HYDRAULIC JACKS — your assurance of a wise and safe investment.

BLACKHAWK

DEPENDABILITY SEAL OF Service Proved QUALITY PERFORMANCE

New Products

(CONTINUED FROM PAGE 206)

in the center, which maintains true concentricity. Oil is retained by a large tube, pressed on one member and connected to the other by means of a neoprene diaphragm. Oil level plugs are provided for checking the oil supply and adding new oil as needed.

Use Free Postcard For More Details.

P236. Truck Power Unit

Ready-Power gas-electric drive is now available to users of motorized hand-lift trucks. The new power unit, Model Z-12, announced by The Ready-Power Co., Detroit, Mich., is a small version of the standard Ready-Power units now used.

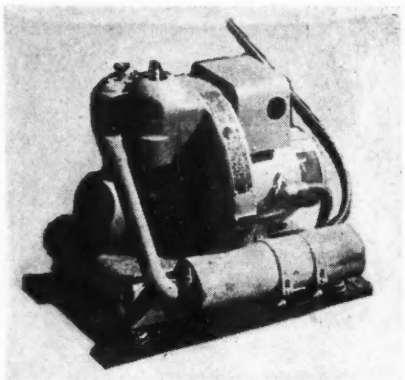
A feature of this unit is that the operating speed may be adjusted to suit plant working conditions and loads being carried. A simple Ready-Power "walking speed control" gives three speeds that are entirely independent of the control mechanism of the truck.

Housed in a heavy steel enclosure and powered by a 4-cyl. gas engine, complete with self starter, this unit weighs 600 lbs. and requires a space approximately 14 ft x 24 ft x 32 in.

Use Free Postcard For More Details.

P237. Portable Booster

A new series of portable gasoline-powered booster generators is offered by the Homelite Corp., Port Chester, N. Y. Available with 6 to 32 volt output and wattages from 500 to 5000, the units are



specially designed to aid truck or construction equipment starting in cold weather. They may also be used for quick charging and each unit is fitted with heavy duty cable and clips.

Use Free Postcard For More Details.

P238. Spray System

A new pump-type underbody coating system, for use in the automotive field, that permits direct-from-shipping-container spray application of high viscosity materials has just been announced by The DeVilbiss Co., Toledo, Ohio.

With the new system (DeVilbiss Type QBD), delivery direct from original 55-gal. drums eliminates the bothersome, time consuming, expensive job of handling materials, contributing immeasurably to the efficiency of the average automotive shop.

The system comes equipped with two independent regulators which make ideal spraying possible under varying conditions of temperature, material consistency, air supply, and hose resistence, the company states.

This independent spray gun and pump regulation is said to permit perfect balance of air pressure and fluid flow for uniform application at all times. The strong, direct placement action of the pump enables the delivery of ample material through the longer lengths of hose required to service large trucks and buses.

Use Free Postcard For More Details.

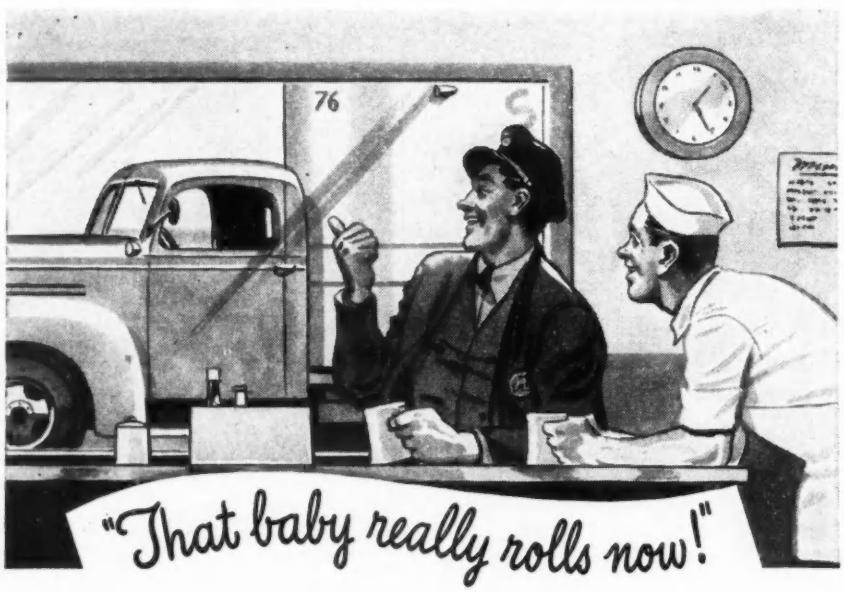
P239. Lift Truck Clamp

A clamping device known as "Clamp-Lift" that enables a fork truck to pick up and carry as many as 18 crates of fruit or other produce without using a pallet has been developed by the Clark Equipment Co., Battle Creek, Mich.

Designed for use on Clark Tructractor's Clipper and Trucloader fork trucks, both gas and battery powered, the device handles crates stacked seven to nine high, two rows deep. The lifting height is limited to 84 in. The Elec-Trucloader can be equipped to handle nine to 11 boxes high, but lift is restricted to 6 in.

Use Free Postcard For More Details.

(TURN TO PAGE 236, PLEASE)



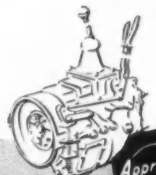
That's only part of the story! His truck not only gets places in far shorter time but also carries a far heavier load.

You see, it's equipped with a Clark 5-speed Transmission. And this heavy-duty transmission makes *any* conventional-type Ford or Chevrolet truck comparable to a 2½- or 3-ton truck that has a 5-speed transmission as standard equipment.

It can be used with single- or two-speed axles—for on-and-off the highway trucking ...heavy-duty tractor use... fast hauling jobs... or bus service.

Truck drivers like the improved performance made possible by the Clark 5-speed Transmission. And so will you! Its five forward speeds are properly spaced to provide the exact power and speed required for practically any driving condition.

Ask your truck dealer or local Truckstell distributor to tell you more about the savings you can make with a Clark 5-speed Transmission. Or write The Truckstell Company, Union Commerce Bldg., Cleveland 14, Ohio.



Approved and Distributed by TRUCKSTELL
SPECIALIZED EQUIPMENT FOR PLUS PERFORMANCE

CLARK FIVE-SPEED TRANSMISSION

Manufactured by **CLARK EQUIPMENT COMPANY, Buchanan, Mich.**

AMERICA'S FINEST!



IN 1946

Millions of Blue Crowns

SPARKED THE NATION'S CARS, TRUCKS and TRACTORS

THOUSANDS of DEALERS SHARED THE PROFITS

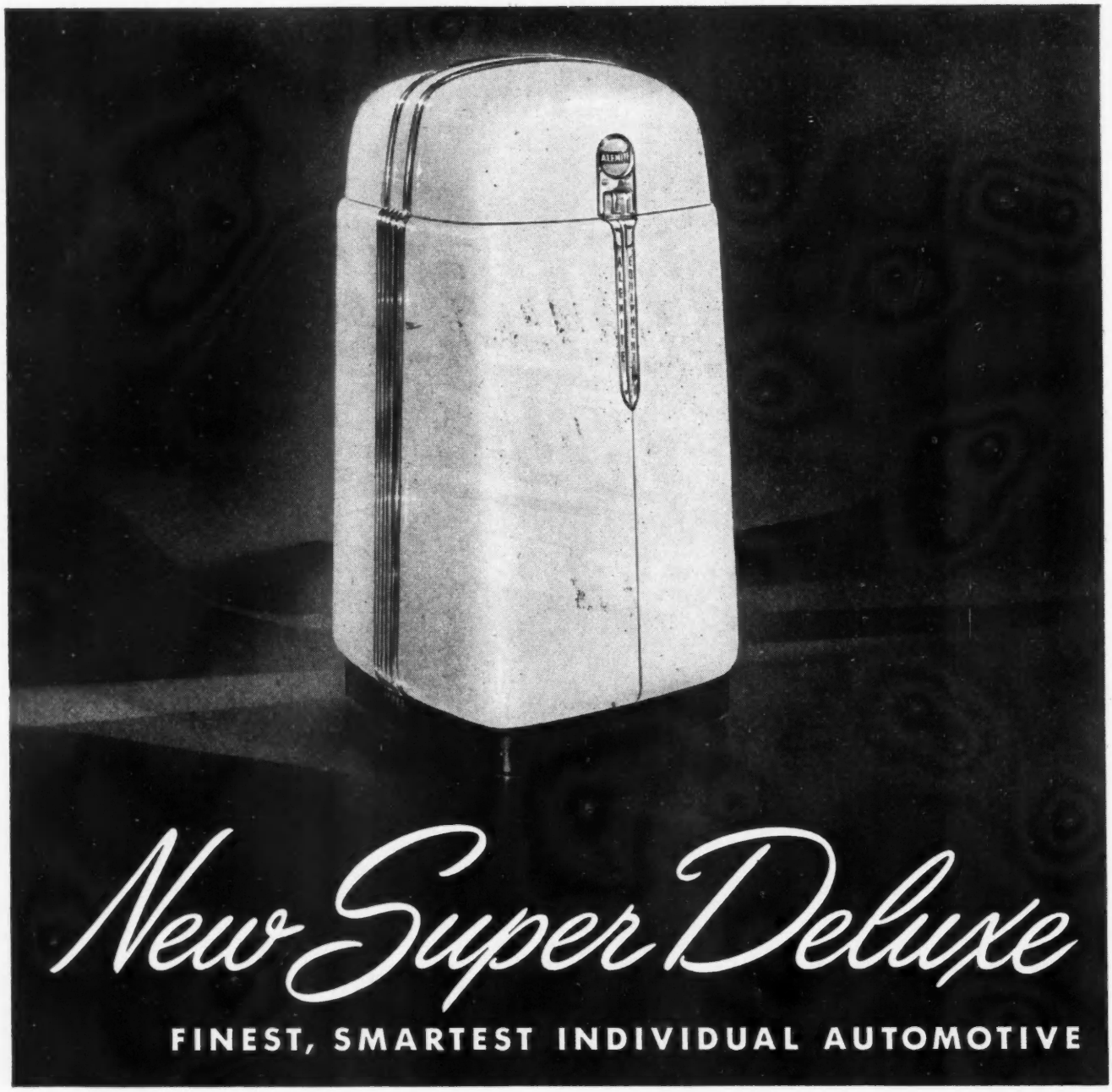
Get Your Share in '47

The original complete line of Heavy Duty Spark Plugs

BLUE CROWNS are better spark plugs, have more talking points, are easier to sell. And the dealer gets a better, fairer margin of profit for his cooperation. *Step-up* customer satisfaction and *pep-up* your sales in 1947 with BLUE CROWN Spark Plugs.

DOMESTIC SALES
BLUE CROWN SPARK PLUG CO.
a DIVISION of MOTOR MASTER PRODUCTS CORP.
1800 WINNEMAC AVENUE, CHICAGO 40, ILLINOIS

EXPORT SALES
Borg-Warner International Corp.
CHICAGO 4, ILLINOIS • U.S.A.
Cable Address "BORINTCO"





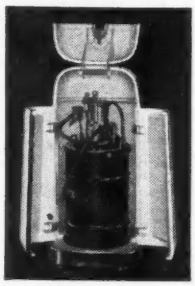
MODERN! STREAMLINED! PACKED WITH SALES AND MERCHANDISING "FLASH". Here's the kind of equipment that will set your establishment head and shoulders above competition. These individual units for portable or stationary installations not only have rich, modern streamlined beauty but they're also super-efficient. You pull in customers by merchandising this beautiful equipment—then you keep them coming back because of the better work you do. The full line includes chassis lubricant pumps, gear lubricant pumps and portable waste oil drains.

ALEMITE
REG. U.S. PAT. OFF.



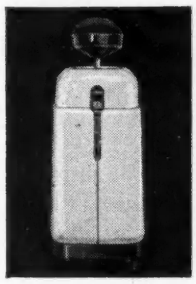
Alemite Equipment

LUBRICATION EQUIPMENT EVER DEVELOPED



OPENS UP COMPLETELY FOR EASY SERVICING

The entire front opens up wide and away from the main cover—the top swings up out of the way. Drums can be changed quickly and easily, without mess and without marring the finish of the unit.



PORTABLE WASTE OIL DRAIN

Matches the other deluxe equipment in beauty. The drain bowl telescopes to any desired height. Use any 100-lb. drum in cabinet to catch waste oil. Unit rolls easily on special, ball bearing, swivel-type casters.

For full details of all models included in the gorgeous new Alemite super deluxe equipment write Alemite, 1876 Diversey Parkway, Chicago 14, Illinois.

Lubrication Equipment

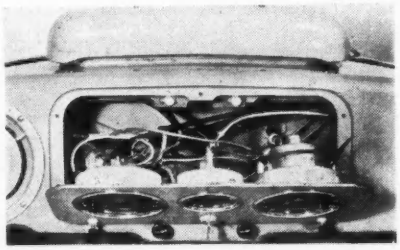
Another Product of STEWART WARNER

New White Cabs Feature Removable Sub-Panel, Heating-Ventilating System

A number of outstanding improvements have been incorporated in the cab design of the latest White WB Series trucks and tractors.

Most noteworthy is the new White ventilating and heating system which provides uniformly heated fresh air in winter and circulates fresh air in summer regardless of truck speed. The complete unit consists of a protected air scoop on the cowl, a manual water control valve supplemented by an automatic capillary tube unit, hot water heating core, motor blower, air diffuser and foot outlet.

Air enters the duct through the cowl air scoop and is forced through two outlets by means of the blower and circulated through the cab. Controls provided make it possible to admit only cool air during the warm months, or pre-heated air in the winter time. Cab temperature is regulated by manual adjustment of the water control valve, which regulates the flow of water to the heater. Turning the knob clockwise increases water flow and vice versa. After the water flow is once manually adjusted to the cab temperature desired, it is then automatically maintained through the function of the capillary tube unit acting on a diaphragm contained in the control unit.



Removable instrument sub-panel is real boom to maintenance operations. Note ventilator intake in cowl above Seat is two-way adjustable. First adjustment takes care of fore and aft movement. Second, provides for adjustment of cushion for proper thigh support

When the control knob is turned in the extreme counter-clockwise direction, the valve is completely closed. In the extreme clockwise direction, it is wide open. In these two positions, the capillary tube unit is inoperative.

Regulation of the air flow through diffuser and foot outlet is controlled by a button. When pulled out, the air flow through diffuser is completely cut off and diverted to the foot outlet. When pushed in, the air flow is cut off completely from the foot outlet and diverted to the diffuser. Variations in air flow through both the foot outlet and diffuser at the same time are controlled by intermediate positions of the button.



Two-way adjustable seat provides fore and aft as well as cushion movement

Another improvement is the new two-way adjustable seat. The first adjustment takes care of the positioning, fore and aft,

(TURN TO PAGE 215, PLEASE)



Call nearest Rowland Distributor. He's supplied by these branches:

ATLANTA 3, Ga., William and Harvey Rowland, Inc., 449 Marietta St., N. W.

BIRMINGHAM 3, Ala., Birmingham Spring Service, Inc., 2017 Avenue B, South

CHICAGO 16, Ill., William and Harvey Rowland, Inc., 2732 Indiana Avenue

JACKSONVILLE 4, Fla., Jacksonville Spring & Alignment Co., 137 Jefferson St.

PHILADELPHIA 30, Pa., William and Harvey Rowland, Inc., 1414 Fairmount Ave.

PITTSBURGH 13, Pa., Point Spring Co., 419 Melwood Street

Get more mileage from SPRINGS

Finding little troubles before they become big ones and major expense items is one job of the Rowland Spring Distributor—and he's good at it. He is organized to help you get more mileage out of your vehicle springs regardless of the make you are now using. Send your vehicles to him for periodic spring inspection and service. Put his wealth of practical experience gained over the years in servicing thousands of trucks and buses to work for you—cutting your costs, keeping the wheels of your vehicles turning—earning. It will pay you to use your nearby Rowland Distributor for spring service and replacement, mufflers, universal joints and wheel suspension parts. Wm. & Harvey Rowland, Inc. Frankford, Philadelphia 24, Pa.

ROWLAND SPRINGS

CERTIFIED ALLOY STEEL ROWLAND SPRINGS Est. 1795

LEAF•COIL•HELPER SPRINGS • UNIVERSAL JOINTS • WHEEL SUSPENSION PARTS



"HIGHWAY" means fast loading easy handling, low ton-mile costs

HIGHWAY TRAILERS are built for business. The modern business of motor transport calls for making the most of every operating minute. It's a familiar business to Highway trailer engineers. That's why, out of over a quarter-century of successful experience, they are able to build trailers that are easy to load—that handle easily in tight quarters—that keep ton-mile costs down so that profits may go up.

Every part, every shipment of material used in Highway Trailers must pass the most rigid quality tests. Highway's own foundry, forge and machine shops furnish an efficient flow of parts to the fast-moving Highway production line. Highway Trailers are *manufactured* in our own modern factories, not merely assembled.

Write today for complete information on the new Highway "Freightmasters," "Clippers," and Warehouseman's Vans. Learn about Highway's many points of superiority. You'll understand why it pays to "let your next trailers be Highways."

HIGHWAY TRAILER COMPANY

General Offices, Edgerton, Wisconsin
Factories at Edgerton, Wis. • Stoughton, Wis. • Farmingdale, L.I., N.Y.

Commercial Truck Trailers • Earth Boring Machines
Winches and other Public Utility Equipment

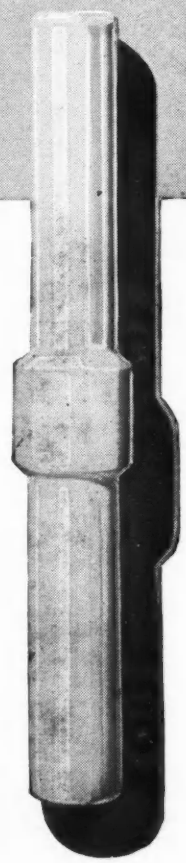
On Every U.S. 22 *Highway*

HIGHWAY *AMERICA'S QUALITY* TRAILERS



FRENCHTOWN INSULATORS

are used by more Spark Plug Manufacturers than any other



HERE ARE SOME OF THOSE WHO RECOGNIZE FRENCHTOWN QUALITY

BOWERS BATTERY & SPARK PLUG CO.
CHAMPLAIN ENGINEERING COMPANY
DUALL SPARK PLUG CO.
F. A. LUTHY CO.
FAN FLAME SPARK PLUG CO., INC.
G. M. CO.
HAYWARD MANUFACTURING, INC.
IGNA SPARKING PLUGS LTD.
JORDAN ELECTRICAL MFG. CO.
MOTOKING SPARK PLUG CO.
PRICE BATTERY CORPORATION
PROSPER C SPARK PLUG CO.
RA-LOY SPARK PLUG CO.
SUPER LEADER SPARK PLUG CO., INC.
SUPERIOR SPARK PLUG COMPANY
SUPERLIFE PRODUCTS COMPANY
THE ACTUS CORPORATION
THE M&G SPARK PLUG COMPANY
THE PARTLOW CORPORATION
THE REFLEX SPARK PLUG COMPANY
TROJAN PRODUCTS COMPANY
WESTERN PRECIPITATION CORPORATION
TUNGSTEN SPARK PLUG MFG. CO.

FRENCHTOWN PORCELAIN CO.

Sales Office
82 MUIRHEAD AVENUE, TRENTON 9, N. J.

Factory
FRENCHTOWN, N. J.

New White Cabs

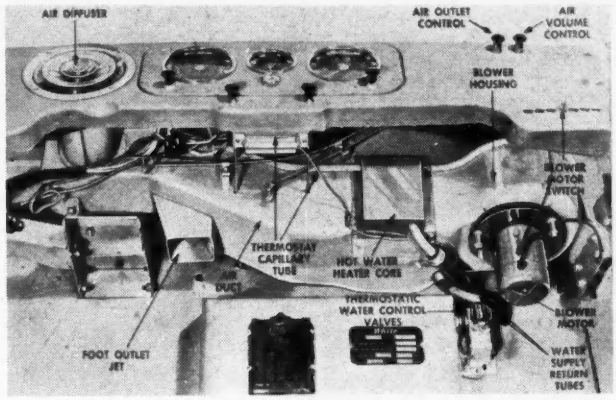
(CONTINUED FROM PAGE 212)

of the entire seat assembly. This is accomplished by merely releasing the lever and regulating the seat for correct position and back support. The second adjustment takes care of the seat cushion itself, making it possible to adjust the cushion for proper thigh support and consequent body comfort. These two convenient adjustments, together with the controlled resiliency of the seat springs, cushion, and back, assure the utmost in driver comfort.

As a definite asset to the maintenance department, the entire instrument subpanel is easily removable for access to the wiring, cables, tubing and the instruments themselves.

Included in other provisions for driver comfort and safety are the greater headroom and wider vision which the new cab offers. A one-piece windshield is used.

A new-type of cam and twin-lever steering mechanism makes possible improved steering geometry and reduces the turning radius while promoting vehicle stability on the road under varying load and speed conditions.



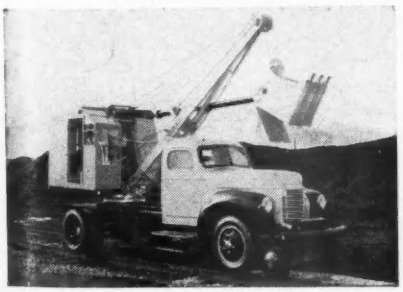
Various units of ventilating and heating system are identified in this photo. Diffuser at left deflects heated air to windshield and sides without blowing on driver's face

HOW TO PICK A MOVER

When Roy Fruehauf moved recently from one part of Detroit to another he sent this questionaire to each of 30 movers who used Fruehauf trailers:

"(1) What have you got the others haven't. (2) What is my discount? (3) That's not enough! (4) Will you give me three years' credit with no down payment, and no interest? (5) Which of these services do you perform free: Pack, crate, refinish, repair? (6) How long do you guarantee my furniture after moving it? (7) Will you re-arrange furniture to suit wife, kids and neighbors? (8) Will you supply nurse for kids during moving? (9) Will you supply nurse for me? (10) How old is nurse?"

After tabulating replies, which were neither published nor conclusive, he solved the problem by inviting bidders to dinner and a lucky drawing. Owl Moving & Storage Co. came up with the winning ticket.



Latest adaptions of the Evans Auto-Railer opens up new use in shovel, dragline, and pile-driving operations. The Quick-Way ¼ cu. yd. shovel is mounted on an International KB-5 chassis. The flanged steel pilot wheels, raised and lowered hydraulically, are similar to other Auto-Railer installations

OTC

PULLING SYSTEM MAKES IT EASY

To PULL and REPLACE CLOSE FITTING PARTS



Bearings, pinions, collars, sprockets, gears, snap rings, shafts, sleeves, wheels and other "tuffies" are quickly and safely removed and installed with OTC PULLERS, attachments and Special Tools. They speed up overhauling jobs, stop parts damage, conserve energy, avoid skinned knuckles, shorten "down time" on trucks.

Approved by all Leading Bearing Manufacturers.

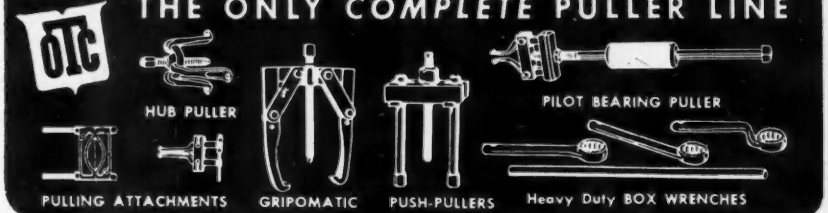
OTC No. PE-12 SET handles the widest possible range of work on trucks, busses and tractors—with minimum number of OTC TOOLS.

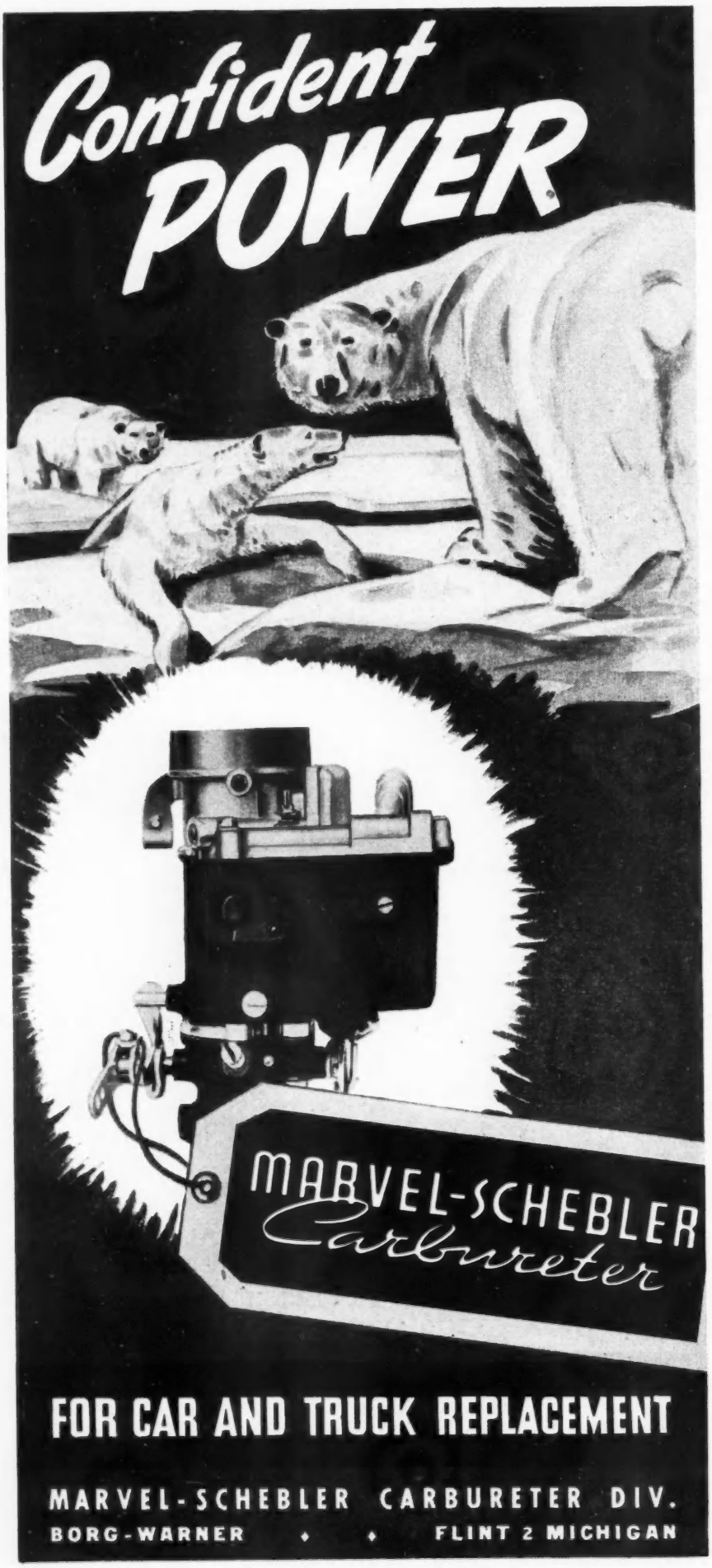
ASK YOUR JOBBER or write for OTC Catalog. It's a helpful manual on pulling operations.



OWATONNA TOOL CO.
335 CEDAR STREET, OWATONNA, MINN.

THE ONLY COMPLETE PULLER LINE





States Review Truck Transport Bills

A number of state legislatures have been active during the first quarter concerning bills affecting highway transportation.

Most unusual is the "Open Shop Bill" signed recently by the governor of Tennessee which makes unlawful the exclusion from employment of any person "by reason of membership in, affiliation with, resignation from, or refusal to join or affiliate with any labor union or employee organization."

To Colorado goes the dubious distinction of being the first state in 1947 to enact a gasoline tax increase. H.645 did the trick, boosting the ante from 4 to 6 cents. In West Virginia the temporary "emergency" tax has been extended for two years. Proposed increases have so far failed in Indiana, New Mexico, North Oakota, Texas, Washington and West Virginia, while increase proposals are still under consideration in Georgia, Main, Maryland, Michigan and Oklahoma.

Liberalized vehicle size and weight limitations have been passed in Montana where AASHO recommendations have been followed, and in New Hampshire where the new maximum gross weight is set at 47,500 lb. Approval for similar liberalization in Arkansas, Idaho, Utah and Washington appear imminent as we go to press.

Periodic motor vehicle inspection bills have been introduced in 16 states: Maine, Vermont, Ohio, Maryland, Colorado, Washington, Utah, Pennsylvania, Connecticut, New York, North Carolina, South Carolina, Illinois, Arizona, Minnesota and California. Privately operated inspection stations are designated by Pennsylvania, New York, California and Ohio bills, with fees ranging from 50¢ to $2.00 per inspection. State owned and operated inspection stations are designated by bills in Colorado, Maryland and second bills in California and New York.

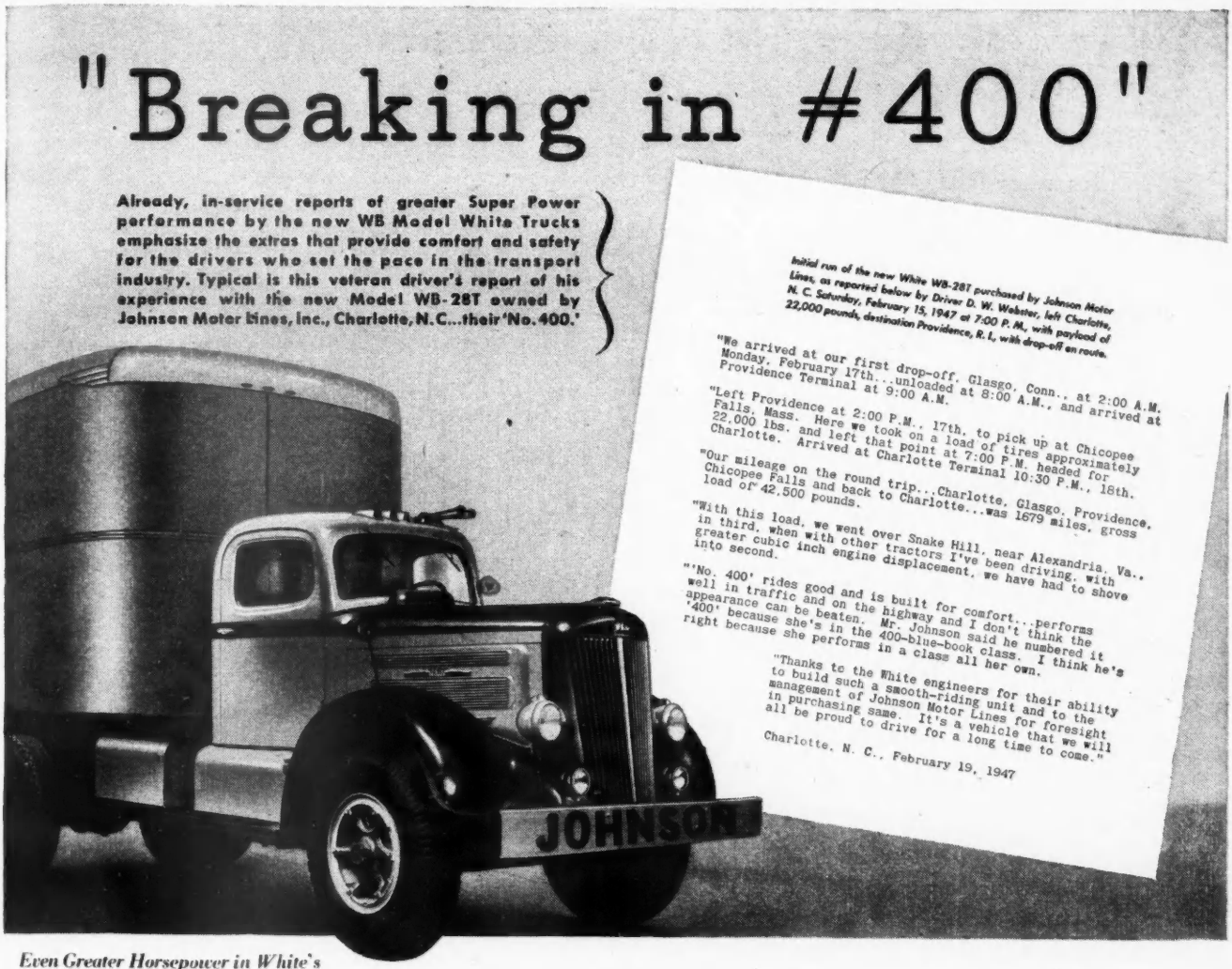
Legislation providing for limited access highways has been introduced in *Arkansas, California, Connecticut, Delaware, Maine, New York, New Hampshire, Oregon, Texas, Washington, Wisconsin,* and *Wyoming.* A majority of the measures have as their objective the construction of new highway systems. In California, Delaware, Maine, New York, Oregon, Washington and Wyoming bills would allow conversion of present highways into limited access facilities, extinguishing access rights through exercise of the power of eminent domain by State Highway Authority.

W. J. GRAVESON DIES

W. J. Graveson, Chevrolet's Atlantic Coast regional manager since 1940, died of a heart attack on Feb. 3. Well known in automotive circles, he had been with the Chevrolet organization since 1923.

"Breaking in #400"

Already, in-service reports of greater Super Power performance by the new WB Model White Trucks emphasize the extras that provide comfort and safety for the drivers who set the pace in the transport industry. Typical is this veteran driver's report of his experience with the new Model WB-28T owned by Johnson Motor Lines, Inc., Charlotte, N.C...their 'No. 400.'



Initial run of the new White WB-28T purchased by Johnson Motor Lines, as reported below by Driver D. W. Webster, left Charlotte, N. C. Saturday, February 15, 1947 at 7:00 P. M., with payload of 22,000 pounds, destination Providence, R. I., with drop-off en route.

"We arrived at our first drop-off, Glasgo, Conn., at 2:00 A.M. Monday, February 17th...unloaded at 8:00 A.M., and arrived at Providence Terminal at 9:00 A.M.

"Left Providence at 2:00 P.M., 17th, to pick up at Chicopee Falls, Mass. Here we took on a load of tires approximately 22,000 lbs. and left that point at 7:00 P.M. headed for Charlotte. Arrived at Charlotte Terminal 10:30 P.M., 18th.

"Our mileage on the round trip...Charlotte, Glasgo, Providence, Chicopee Falls and back to Charlotte...was 1679 miles, gross load of 42,500 pounds.

"With this load, we went over Snake Hill, near Alexandria, Va., in third, when with other tractors I've been driving, with greater cubic inch engine displacement, we have had to shove into second.

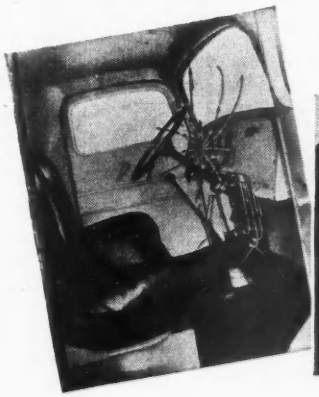
"'No. 400' rides good and is built for comfort...performs well in traffic and on the highway and I don't think the appearance can be beaten. Mr. Johnson said he numbered it '400' because she's in the 400-blue-book class. I think he's right because she performs in a class all her own.

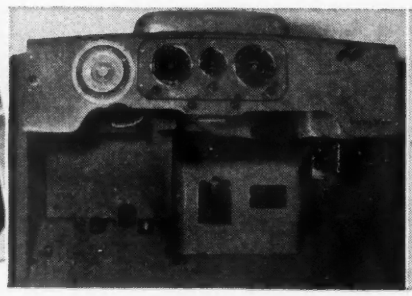
"Thanks to the White engineers for their ability to build such a smooth-riding unit and to the management of Johnson Motor Lines for foresight in purchasing same. It's a vehicle that we will all be proud to drive for a long time to come."

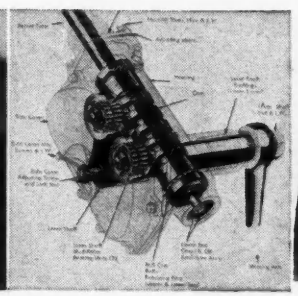
Charlotte, N. C., February 19, 1947

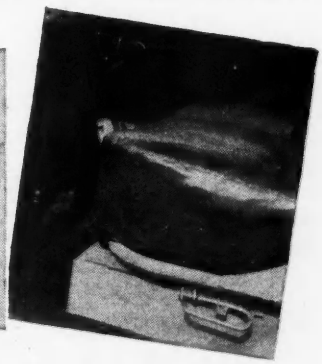
Even Greater Horsepower in White's New WB Super Power Models!

Drivers Everywhere Enthused about Exclusive White Cab Features









DIAL YOUR CAB CLIMATE!
Living room comfort the year 'round. Regulated flow of clean air through carefully designed diffuser on instrument panel. Complete heating and ventilating system is compact, efficient and automatic.

DESIGNED FOR DRIVING!
To the left is the compact diffuser for the new heating and ventilating system. Easy-to-use controls are to the right. The exclusive hinged sub-instrument panel, center, permits ready inspection.

NEW STEERING EASE!
It isn't hard work to steer the new White! Newly designed cam and twin-lever steering reduces turning radius, increases maneuverability, and makes possible more stabilized ride.

ADJUSTABLE CUSHIONED RIDE!
At last the BIG man can be comfortable! Position of both seat assembly and cushion readily adjust to driver's own comfort requirements, regardless of his size. Seat fitted to the driver with 2 adjustments.

Your White Representative will gladly provide literature describing the advantages of the new WB models now in production.

THE WHITE MOTOR COMPANY • CLEVELAND, OHIO

For more than 45 years the greatest name in trucks

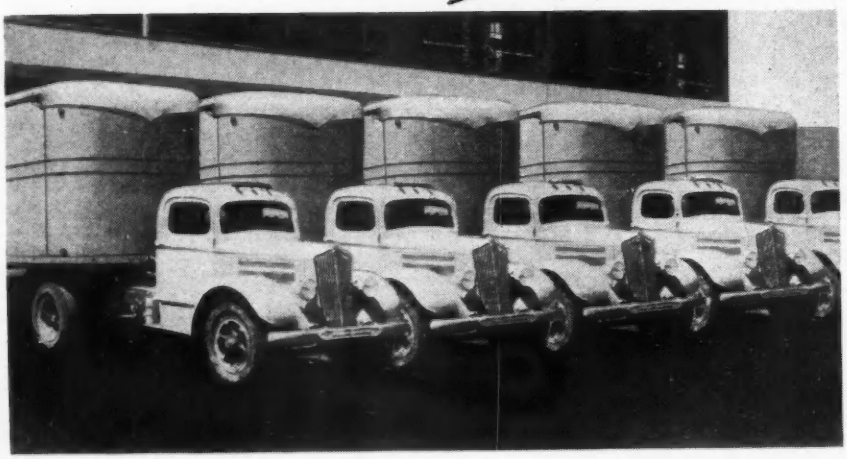
White

Driver Training–Key to Safety

New men get 18-point training course and old drivers 13-point refresher. Operation improved, insurance costs cut

by ***JOHN F. STRANAHAN***
Director of Personnel and Safety
and
ROYAL E. BURNS
Chief Driver Trainer
St. Johnsbury Trucking Co.
Cambridge, Mass.

ROAD TIME PAYS DIVIDENDS
Keep 'Em Rolling and Paying



with



Repair lay-up time is reduced more than 40% when trucks are Hypressure Jenny steam cleaned before your mechanics start working on them. That means you get them back on the road in practically half the time. Periodic Hypressure Jenny steam cleaning often reveals worn and damaged parts for repair before dangerous, time-consuming, road failures occur . . . increases pay loads by ridding chassis of as much as 400 lbs. extra weight due to accumulated road dirt . . . assures more economical operation . . . reduces fire hazards. Besides keeping your fleet "rolling and paying," Hypressure Jenny further adds to your profits by cleaning garage floors, runways, grease racks, pits, tools, machinery, walls, windows and skylights 8 to 10 times faster and better than by hand methods.

Write today for further particulars and the address of your nearest Hypressure Jenny Dealer.

HYPRESSURE JENNY DIVISION
HOMESTEAD VALVE MANUFACTURING CO., P. O. BOX 90 CORAOPOLIS, PA.

THE St. Johnsbury Trucking Co. approaches the business of hiring and qualifying drivers with the attitude that the most important single individual connected with movement of freight by motor truck is the driver. We believe this fact is true with respect to local, as well as over-the-road drivers.

It must be remembered that into the hands of our drivers is entrusted large and sometimes very costly cargo. Likewise, the equipment on which this cargo is carried is valuable and at the moment difficult to replace. These men spend most of their hours out of sight of immediate supervision and therefore must be the type of men who can be relied upon to carry out their respective assignments.

The company never loses sight of the fact that the driver largely controls the only commodity that the company has to sell. That commodity is service. It is, therefore, of utmost importance that men be selected for these jobs who have a sense of responsibility and more than that—loyalty to a cause.

With these so-called job specifications in mind, the company has adopted a program of careful selection and thorough training of its key men—the drivers.

Applicants for driving jobs are first interviewed, during which time considerable background of the applicant is determined. If the interview seems satisfactory, the applicant is given a short preliminary road test with the type of equipment with which he has had experience, whether straight truck or tractor-trailer.

(TURN TO PAGE 220, PLEASE)

BUDD WHEELS

THE ONLY WHEEL WITH COLD TAPERED DISC



BUDD WHEELS have been rolling up unmatched service records for more than a quarter century. The U. S. Army standardized on Budd for all heavy duty vehicles. More than 60 per cent of all trucks and busses are equipped with them.

Such leadership must have a reason. You'll find it not only in Budd design, not only in the cold-rolled tapered disc which gives maximum strength with resiliency, not only in the raised centre and accurate ball-nut mounting. Budd Wheels have earned their position by constant research and development of worthwhile improvements, coupled with the highest standard of precision manufacture.

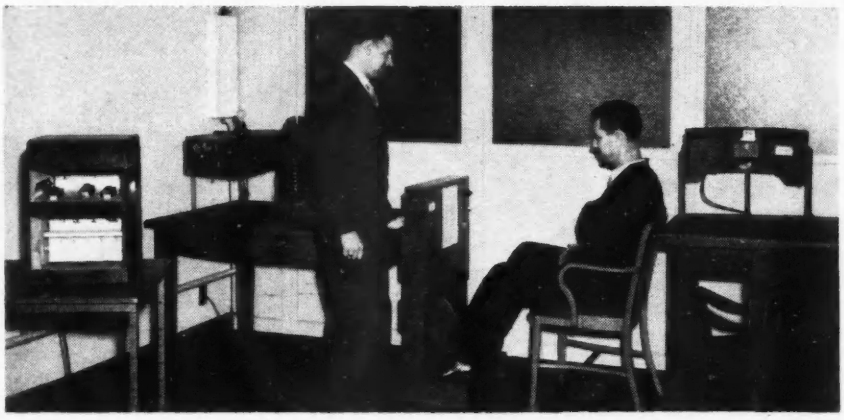
If you are ordering new equipment, it is well worth while to specify Budd Wheels. And a re-check of your present trucks may show advantage in changeover now. Get in touch with your nearby Budd distributor and learn how he can help you reduce hauling costs. The Budd Company, Detroit.



Driver Training

(CONTINUED FROM PAGE 218)

Once this preliminary road test has been successfully passed, an application for employment form is filled out in detail and all references including past employers as well as character references checked. Motor vehicle departments in the states in which the applicant holds or has held driving licenses are contacted and the



Prospective driver gets a physical reaction test in the company's driver training room at the Cambridge terminal

applicant's past driving record procured. Once these papers are assembled and found satisfactory the applicant is given notice to secure a physical examination which must be performed by a practicing physician.

The next step sees the applicant on the payroll and turned over to one of our driver trainers. These driver trainers, two full-time and two part-time, have been specially schooled in the technique of driver training. This education has been made available in school sessions conducted by Amos Newhart, driver training consultant of the A.A.A. and head of the National Committee for Motor Vehicle Fleet Supervisor Training sponsored by the A.T.A.

The first school attended by our trainers was held at Boston University in 1945 under the supervision of the Liberty Mutual Insurance Co. of Boston, which brought Mr. Neyhart's Fleet Course to New England for the first time. More recently our men have attended similar sessions held at Northeastern University in Boston and at Pennsylvania State College.

These schools are conducted in such a manner that the attending students not only learn a great deal about modern driving technique but the subjects covered are handled in such a way that high-pitched interest is sustained from the opening session through to the close. The subjects covered and the method of presentation indicates an unbelievable amount of research and accumulated data. The Liberty Mutual people maintain a full-time driver trainer

(TURN TO PAGE 222, PLEASE)

Here's a new shop "tool"

Here's 48 pages of SERVICING information with plenty of pictures for easy reading. Every popular type joint is illustrated and clear concise explanations are given for servicing them. Also contains catalog listing of joints used in most passenger cars and trucks. A real shop tool, in a tough cover, designed to save you time by simplifying your universal joint work. At your Neapco Jobber's now. If he can't supply you, send 50¢ for each copy required to

New England Auto Products Corp., Pottstown, Pa.



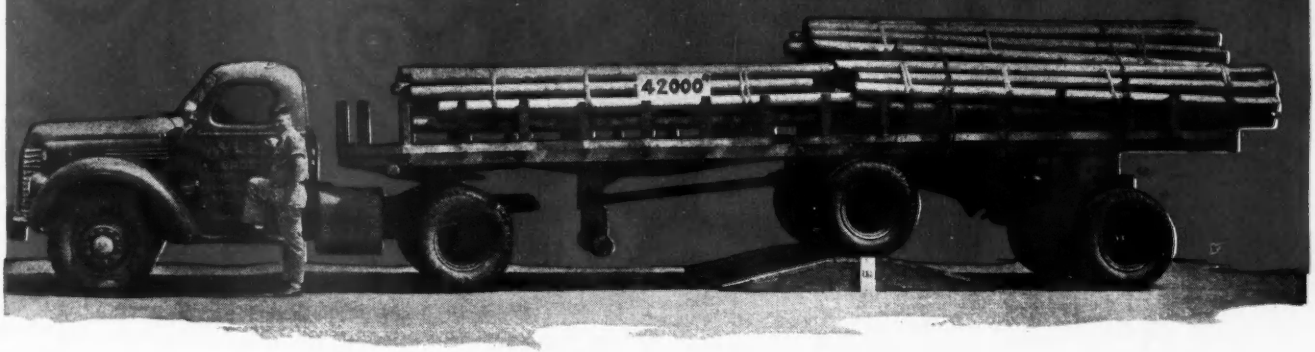
TRADE NEAPCO MARK



UNIVERSAL JOINTS & PARTS

SMOOTH RIDING

with HOOBLER UNDERCARRIAGE



Flexible, multiple support absorbs road bumps before they reach the cargo

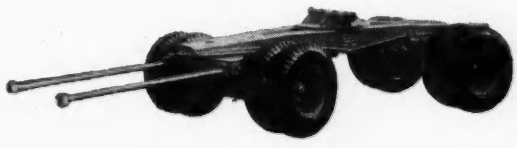
EGGS or steel travel safer on trailers equipped with the Hoobler self-steering Undercarriage. That's because its unique design provides flexible cushioning for the load. With a 109" wheelbase, road bumps and shocks are almost entirely absorbed before they reach the cargo, and the cargo does not shift on rough roads.

The Hoobler Undercarriage has other advantages that make trucking faster, safer, and more economical. Self-steering, it follows directly in the path of the tractor "Indian fashion"—on tight turns or in traffic. The entire unit can be taken through crowded streets as easily as a passenger car.

Other features: capable of increased payloads; less operating cost per ton mile; simple in design and construction; easy to handle; quickly inspected and serviced.

The Hoobler Undercarriage is designed for use with standard brakes, axles, wheels and tires. For all over-the-highway trailers, 28 feet in length and up.

For complete details, write The Union Metal Manufacturing Co., Canton 5, Ohio.



UNION METAL

DESIGNERS AND PRODUCERS OF STEEL PRODUCTS SINCE 1906

Builder of The Hoobler Undercarriage

Driver Training

(CONTINUED FROM PAGE 220)

supervisor who works in close conjunction with our full-time and part-time driver trainers. Through the efforts of these people our company is able to apply a practical course of instruction which our trainees find not only instructive but intensely interesting throughout our training course.

Now back to our applicant who has now become a trainee enrolled in our prescribed 18-point driver-training course. Some of the items in this course are taught out in the field with equipment such as trucks, tractors or trailers and others covered in our driver training room located in our new Cambridge terminal. This room is equipped for thoroughly testing the applicant's visual accuity, and physical and mental reactions. There is a battery of apparatus in this room which includes tests for field of vision, darkness accuity, glare resistance, glare recovery, color blindness, depth perception, steadiness of hand, and brake reaction. The room is equipped also with a complete air brake lay-out which demonstrates just how the brakes work. There is also a sound-slide film projector and screen for showing training films.

The course covers the following specific items:

1. COURSE EXPLAINED

1. It is explained to the trainee why such a course is taught and what subjects are to be covered in the course so as to at once remove the mystery and arouse his interest.

2. REGULATIONS

Since safety is the keynote of the entire driving operation, this subject is taught early in the course and is coupled with the teaching of ICC regulations and the making of logs.

3. LIFTING SAFELY

The trainee is taught how to handle freight safely both for himself and the merchandise.

4. PRE-DRIVING CHECK

This item is devoted to a pre-driving check stressing the importance of catching safety items, and detecting and correcting such difficulties as might otherwise cause road failure.

5. TRACTOR - TRAILER HOOK-UP

The trainee is instructed in proper hooking up of the tractor to trailer, stressing the importance of each step.

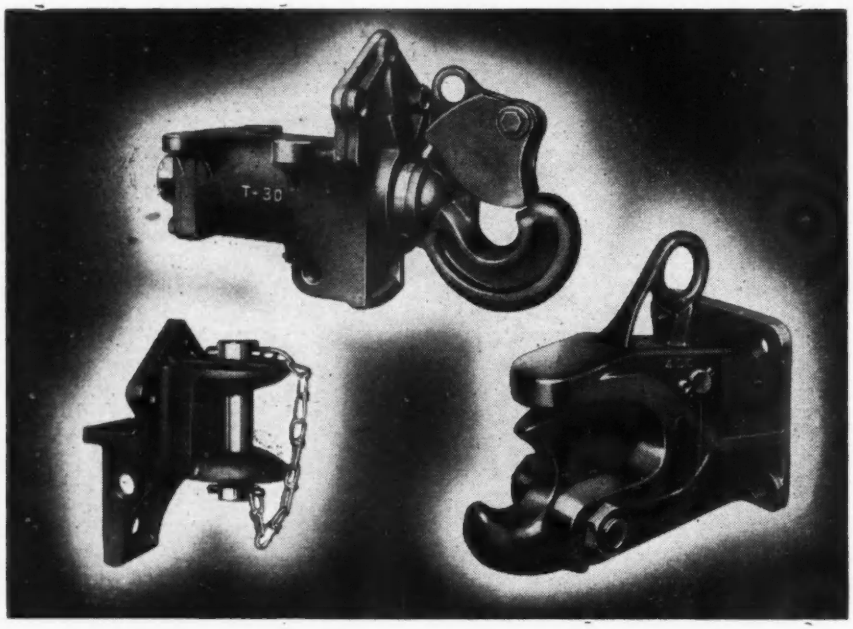
6. TRAILER CHECK

The trainee is taught that the trailer is part of the vehicle and requires thorough pre-driving check, as does the tractor.

7. ROAD TEST

This item is devoted to over-the-road driving test on which a scientifically designed score sheet is kept with the trainer, noting all shortcomings exhibited by the driver. These defects in his driving practices are called to his attention during the

(TURN TO PAGE 224, PLEASE)



NEW Double Acting Pintle Hooks
Automatic Industrial Couplers
Solid Couplers for Trucks & Trailers

Write for detailed specifications of the complete Holland line.

All types for all purposes—engineered for smooth, efficient performance, with many special features that make the Holland line preferred by experienced truck and trailer fleet operators. Whatever your needs in pintle hooks, couplers, bars, or hitches, come to Holland with your problems;—you'll find the right product for the right spot.

Made by the makers of Famous Holland fifth wheels and landing gears.

ENGINEERED BY
HOLLAND HITCH COMPANY
HOLLAND, MICHIGAN, U. S. A.



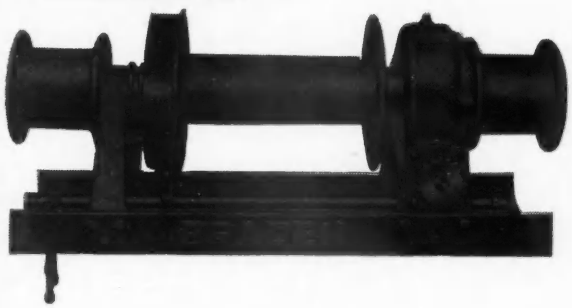
Mack truck sales and service for Mexico, New Mexico and half of Texas are handled through this factory branch at Dallas. The new building features a completely equipped machine shop, ample service area and revolving parts racks

A TOUGH BABY



For Tough Handling Jobs!

BRADEN MODEL M9-18B



This NEW Braden Model is engineered for extra tough handling jobs that require the utmost in safety and ease of operation. The M9-18B will handle loads up to 18,000 lbs. with a safety factor of 3 plus. It is designed for 1½ and 2 ton trucks and comes complete with full cab controls. The M9-18B has, as standard equipment, the New OIL-COOLED FULLY ADJUSTABLE, AUTOMATIC SAFETY BRAKE which makes it the safest truck winch on the market within its rated capacity. All Braden Winches can be had with the sensational NEW 2 speed forward and 2 reverse speed drive which the winch operator has waited for for the past twenty-five years.

Write for Complete Catalog for Information concerning the entire Braden "M" Series truck winches.

BUY BRADEN - They are Safer

BRADEN WINCH COMPANY
1001 East Admiral Boulevard

BRADEN Winches
OF SERVICE AROUND THE WORLD

TULSA 3,
Oklahoma

Driver Training

(CONTINUED FROM PAGE 222)

test and he is further watched to see that they are eliminated during the balance of the test. These tests are performed in two different ways:

a. Over a pre-determined route requiring about one hour.

b. During a regular trip for the driver—one whole day if local, or an over-the-road run if for a road driver.

8. TRACTOR-TRAILER UNHOOK

Proper methods of unhooking a tractor from trailer—again stressing importance of each individual step.

9. DEFECT REPORTS

The trainee is taught how to properly make out a Vehicle Defect Report on which he reports service work needed on truck, tractor or trailer. Included in this item is the explanation of the use of Road Drivers Reports for over-the-road men. Road Drivers Reports are dispatch cards coupled with vehicle inspection data.

10. ACCIDENT REPORTS

Instructions on how a driver should conduct himself at the scene of an accident and how to procure the necessary information for reporting accidents in which he is involved, and preparation of Driver's Report of Accident.

11. MECHANICAL KNOWLEDGE

The trainee is conducted on a trip through the maintenance department at which time mechanical features of trucks, tractors, and trailers are explained.

12. CLOSE QUARTER DRIVING

The trainee is given what is termed Skill Developing Exercises. This program is carried out on an area marked out in white lines at which time the trainee is taught how to maneuver his truck or tractor-trailer in and out of tight places. He is taught the forward and rear limits of his vehicle. He is shown graphically the limits of his ability to stop quickly when the need arises through the use of a device which measures not only the actual braking distance of the vehicle, but also the distance of travel while deciding to apply the brakes. This is referred to as "thinking distance." Additional details of this procedure will be explained later.

13. CUSTOMER CONTACT

The trainee is taught proper conduct when in contact with customers, or others outside of our company, with a view of securing a maximum of good-will for himself and his employers.

14. PAPER WORK

This item teaches the driver how to pick up freight, securing the proper papers, and how to deliver freight, handling his incidental paper work carefully and thoroughly.

15. LOG INSPECTION

This deals with an inspection of the logs the trainee has made out during his training course, since he took Item No. 2 which taught him how to make such logs.

16. DRIVERS' MANUAL

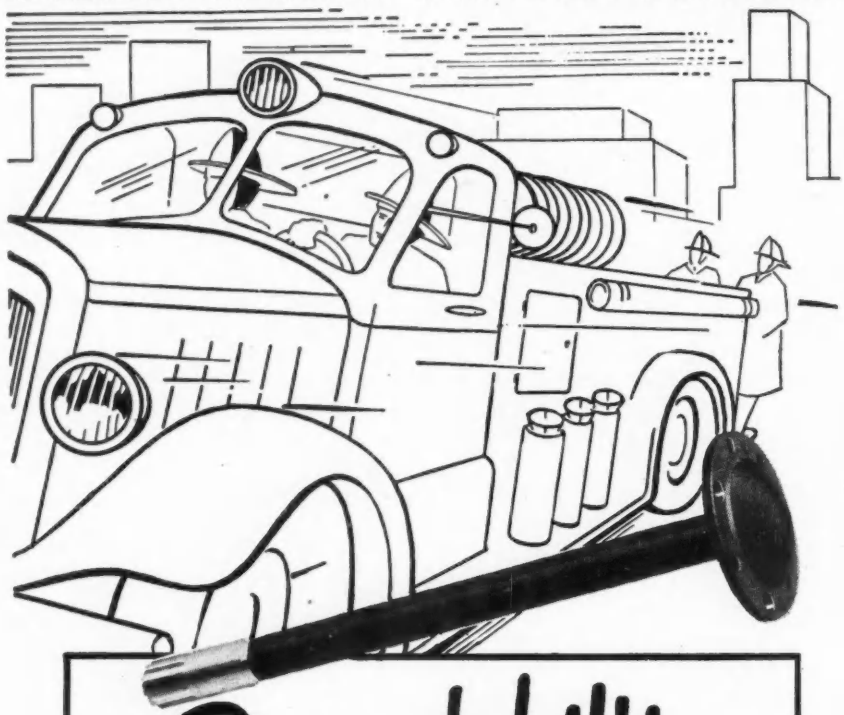
This covers a complete description of our Manual for Drivers, how to get the greatest use out of this publication, and, of course, the Manual is issued to the trainee at this point.

17. EXAMINATION

This deals with a verbal examination during which time the trainee answers to the best of his ability

(TURN TO PAGE 226, PLEASE)

US AXLES HELP THE WHEELS OF INDUSTRY TURN MORE PROFITABLY



Dependability

The dependability of U.S. Axles is proven in their toughness and resulting lower maintenance costs.

Designed to be tough--U.S.Axles are a combination of the finest of alloy steels, precision machining, modern scientific heat treating and rigid inspections. Tough U.S.Axles are right for their job -- save you time, and dollars. Get them from your nearest automotive Jobber -- today.

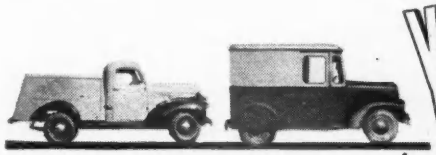
US AXLES

THE U. S. AXLE COMPANY, INC., POTTSTOWN, PA.

Tops in Delivery Efficiency!



For over fifty-five years, ever growing experience plus top quality materials and fine craftsmanship have been the basic factors contributing to the reliable performance of York-Hoover Bodies . . . factors, too, that have earned and maintained the valued confidence of our customers.



YORK-HOOVER BODY DIVISION CORPORATION

YORK, PENNSYLVANIA



Driver Training

(CONTINUED FROM PAGE 224)

questions based on his knowledge of all the points heretofor covered. Any questions which are missed are clarified in the trainee's mind at this time.

18. CERTIFICATE

The final step covers the presentation of a St. Johnsbury Trucking Co. Driver's Certificate which certifies that the driver has passed the required training course and certifies him for the type of vehicle—whether straight truck only or tractor-trailer combinations. Certificates are serially numbered and number is noted.

Driver Reaction Tests

ONE of the most interesting phases of the instruction program is the manner in which we graphically demonstrate driver reaction and stopping time, outlined in Item 12. Each trainee is asked this question:

"If you were driving 20 m.p.h. on smooth, level, dry concrete and you were suddenly confronted with the necessity for an emergency stop, how many feet do you think you would travel before you could actually bring your vehicle to a dead stop?

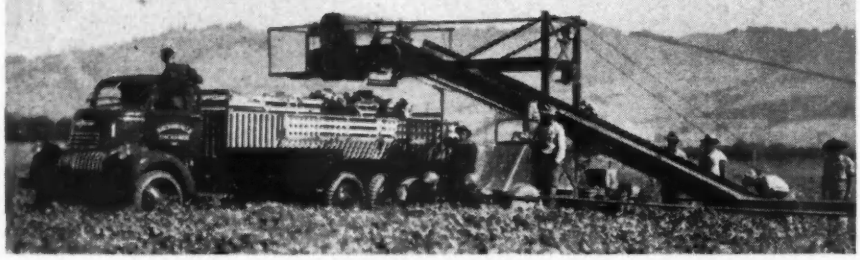
The trainee is then requested to write his answer and his name on a slip of paper which is turned in to the trainer before a demonstration takes place. The answers vary from a ridiculously low figure to a reasonably correct figure. However, to date 95 per cent of the answers have been lower than the distance actually required under ideal conditions.

The device, known as the Brake Detonator, is used for the purpose of accurately measuring the distance which the vehicle travels from the moment the driver recognizes the need for an emergency stop until such stop is actually made. This distance is comprised of two separate and distinct elements. The first is known as "reaction time" and the second as "braking distance."

The Detonator itself is made up of a piece of steel approximately 5 inches square and ⅝ inch thick through which is bored two holes accommodating .22 caliber blank cartridges. This piece of steel is suspended from a heavy wire hanger, the wires being shaped so that they will hang over a front bumper and the suspension designed so that the piece of steel can swing forward and back from these wires. Into the lower end of these two holes are inserted two capsules containing a yellow powder such as sulphur. The .22 caliber blank cartridges are then placed in the top of the two holes. Two separate triggers are used to explode the two car-

(TURN TO PAGE 228, PLEASE)

1½ m.p.h. IN THE FIELD...
50 m.p.h. ON THE HIGHWAY...



with FABCO DUAL DRIVE

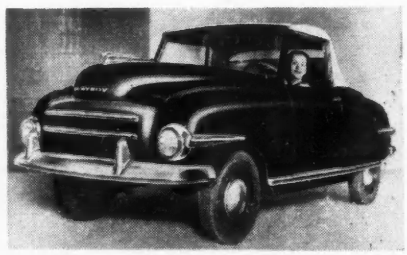
Harvesting lettuce at Watsonville, California, follows the pattern of the slowly moving assembly lines of modern industrial plants. In the lettuce fields they require adequate traction, coupled with a slow-moving vehicle.

They have found the Fabco Dual Drive, with the track widened to 80" to run between the lettuce rows, ideal for this service, because it provides double the usual traction, and low gear ratios so that the truck barely crawls along at 1½ miles per hour with the engine at idling speed. Leaving the field, the second axle is disengaged, and they barrel down the highway to the packing shed at the legal speed limit.

Fabco Dual Drives are also popular in other agricultural fields, as in hauling sugar cane, livestock, harvesting pineapples, hauling grain, equipment and supplies. Write for our catalog. Distributors in principal cities.

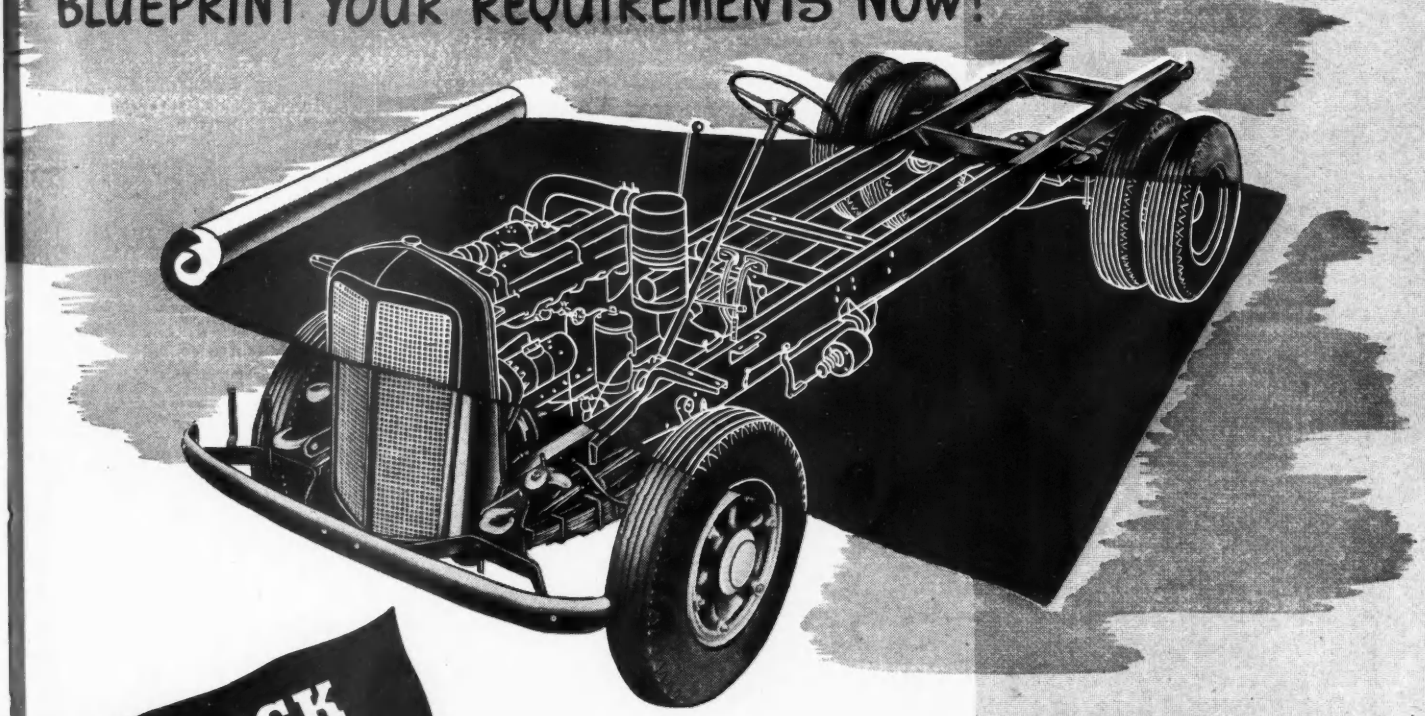


F. A. B. MANUFACTURING CO.
1249 SIXTY-SEVENTH STREET • OAKLAND 8 • CALIFORNIA



The "Playboy," introduced by Playboy Motor Car Mfg. Corp., Buffalo, is latest bid in the ultra-small car field. It features a rear-mounted 4-cyl. Continental engine, independent suspension on all four wheels, hydraulic brakes and an "Aut-o-matic drive" said to eliminate gear shifting and clutch

BLUEPRINT YOUR REQUIREMENTS NOW!



TRUCK PARTS

Use the quick-reference Property List available at any of the 33 WAA Regional Offices conveniently located throughout the country. Check your requirements against available stocks. Information includes *manufacturer's code number, manufacturer's catalogue part number, manufacturer's part description, unit of pricing, quantity and manufacturer's list price.*

HERE'S HOW YOU ORDER TRUCK PARTS

- Go to your nearest WAA Regional Office.
- Ask for the Automotive Parts Section.
- Examine the Property List.
- Make up your own list by manufacturer's part number.
- Place your order.
- That's how simple it is!

All the information you need, for ordering truck parts at huge discounts, is compiled in one volume—which is kept up-to-date by means of a revised inventory every six weeks. Supplements on critical items, for priority claimants only, are issued every three weeks. You can tell at a glance what we have, how much is available, and the manufacturer's list price.

This easy-to-use reference covering millions of surplus truck parts is for your convenience in ordering. The parts listed were manufactured for all makes and models used by the armed forces. This information is available at the Automotive Parts Section in each WAA office, but is centrally compiled in Detroit.

Make full use of this up-to-date inventory to solve your parts requirements problem. You can place your order on the spot for prepaid shipment. Visit or write the Automotive Parts Section of your nearest WAA Regional Office at your earliest opportunity.

OFFICE OF GENERAL DISPOSAL

WAR ASSETS ADMINISTRATION

GOVERNMENT WAA SURPLUS

Offices located at: Atlanta • Birmingham • Boston • Charlotte • Chicago • Cincinnati • Cleveland Dallas • Denver • Detroit • Fort Worth • Helena • Houston • Jacksonville • Kansas City, Mo. Little Rock • Los Angeles • Louisville • Minneapolis • Nashville • New Orleans • New York • Omaha • Philadelphia Portland, Ore. • Richmond • Salt Lake City • St. Louis • San Antonio • San Francisco • Seattle • Spokane • Tulsa

704-8

TRADE DISCOUNTS
(Minimum sale—$500 net)

Discount off manufacturer's list price as shown in Property List:

Fleet Owner (5 or more vehicles) 45%

Service Garage 50%—
Vehicle Dealer 55%

Manufacturer, Distributor, Exporter 75%

☆ ★ ★

WAA POLICY

Some parts are in limited supply. When orders for such parts are received, the parts are allocated equitably as follows: 30% of parts in short supply will be held to fill orders from Federal agencies. Orders from other buyers will be filled in the following sequence:

(1) Certified Veterans of World War II

(2) Subsequent priority claimants

(3) Non-priority claimants

Other parts are in normal supply. A reserve of 10% of parts in normal supply will be held to fulfill the needs of priority claimants. Veterans of World War II should apply to their nearest WAA Regional Office for certification; the actual certificate must be attached to a Veteran's offer to purchase.

All orders are subject to existing priority regulations and to prior sale.

☆ ☆ ☆

EXPORTERS:

Your business is solicited. Much material which is surplus in the United States is urgently needed or is readily saleable in other countries. Watch for offerings which may be of interest to your clients; if prices are set to different trade levels, you are entitled to buy as a wholesaler.

Driver Training

(CONTINUED FROM PAGE 226)

tridges, the first is controlled by the trainer riding with the driver being tested, while the second trigger is controlled by the swing of the detonating device — the swing coming into play at the time when the brakes are first applied.

The driver being tested is told before the test begins that he is to attain a speed of 20 m.p.h. and that some time after having attained such speed he will hear the report of one of the .22 blanks and that when he hears such a report that is his signal to apply the brakes immediately and stop as quickly as possible. When the trainer pulls the cord connected to the trigger exploding the first blank cartridge, the cartridge not only is the driver's notice to stop quickly but, besides, the explosion shoots the yellow powder in the capsule on to the ground making a clear, well-defined mark on the ground.

At the time the driver exerts braking action on the vehicle the detonating device swings forward automatically exploding the second blank cartridge which again makes its mark on the road. The vehicle still goes several feet before it actually stops and at the point where it stops a chalk line is placed on the road immediately under the front bumper where the detonator hangs. The vehicle is then moved away to a safe parking place and the three marks on the road measured.

The average reaction time for a driver is about .75 second. Since a vehicle traveling at 20 m.p.h. covers 29 ft. in one second, it will be seen that the average driver covers 22 ft. before he can exert the first braking action. The vehicle will usually cover another 17 ft. from the time the brakes are first applied until the vehicle is brought to a dead stop. Thus, it will be seen that a total of 39 ft. is usually traveled from the time the driver first receives notice of an emergency stop until the stop is actually consummated. This distance from the first powder mark to the second represents the driver's reaction distance or time, and the distance from the second powder mark to the chalk line indicates braking distance or time.

Practically all drivers of automobiles believe that they can stop in an average of 20 ft. at 20 m.p.h. However, the use of this device conclusively proves that under the most ideal possible conditions the vehicle will travel about twice as far as the driver thinks it will until he has seen this test.

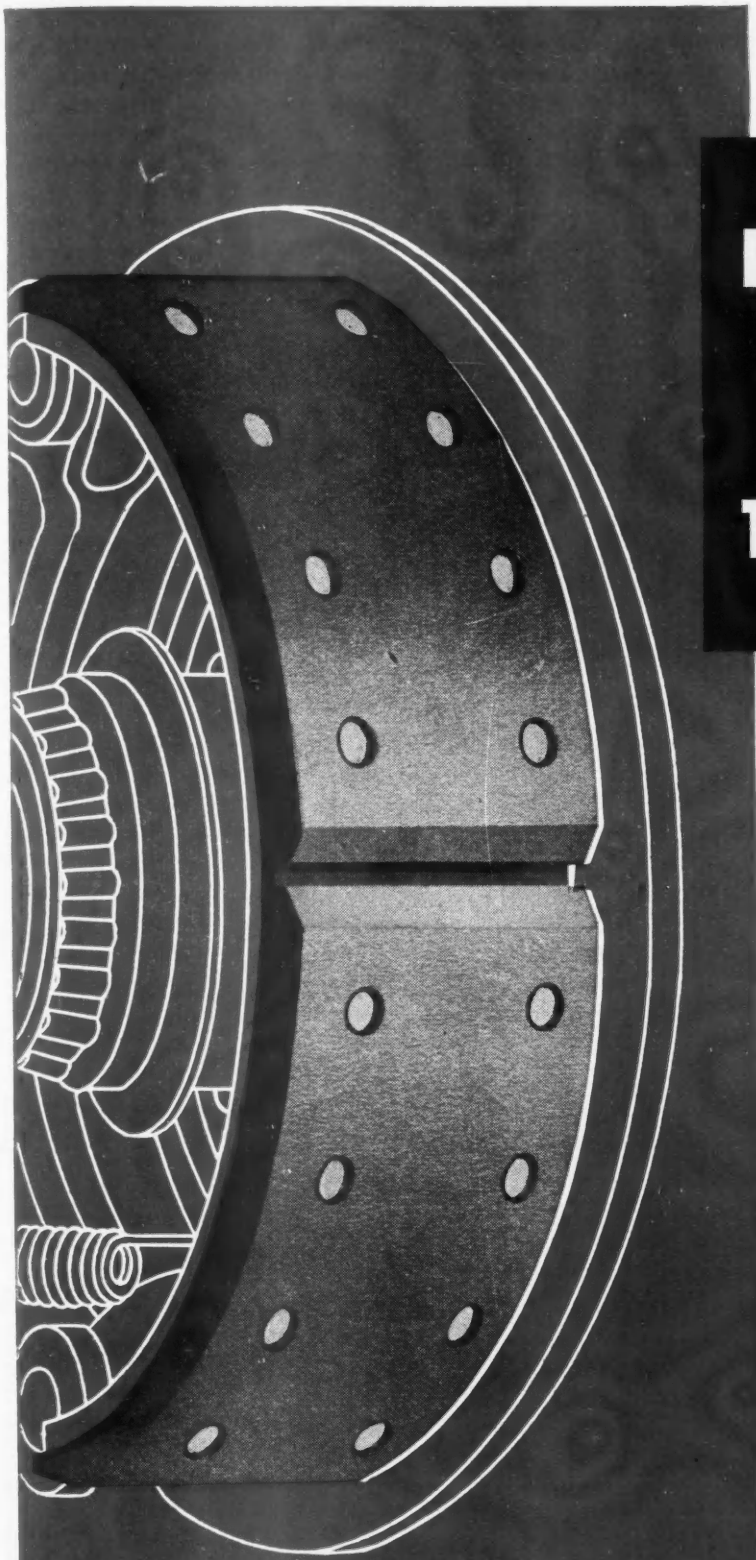
The full meaning of this demonstration is brought graphically home to the trainee when it is explained that when a vehicle moving at only 20 m.p.h. passes a row of parked cars, it also passes up to four spaces between parked cars. From any of these spaces a child could run into the road and we explain to the trainee that even if it were his own child he could not possibly stop in time to avoid an accident.

Experience has proven that this demonstration has a most sobering effect on even the hardest boiled old-time drivers that thought they knew all the answers.

Each of the 18 points in the training program is listed by number on

(TURN TO PAGE 230, PLEASE)





It Pays To Use "Longer-Life" Thermo-Blocks

No question about it . . . for "longer-life" reline jobs . . . use Thermo-Blocks.

Thermo-Blocks—the heavy duty linings that give you the brakes—are specially designed for heavy duty service. They give superior performance under the most severe operating conditions.

Get the specially designed Thermo-Blocks made for your units. Use them on all heavy duty reline jobs. Find out what the longer life built into Thermo-Blocks can mean to you in lowered maintenance costs, and less down-time per unit.

Thermoid

The "Longer-Life" Line for Heavy Duty Service

THERMOID COMPANY, Trenton, New Jersey

Copyright 1947—Thermoid Company

THERMOID • THE LINING THAT GIVES YOU THE BRAKES

Driver Training

(CONTINUED FROM PAGE 228)

a sheet entitled "Instruction Procedure." As each item is taught, the corresponding number is checked off as completed. Once the course has been completed, the driver-trainer signs this sheet — that the trainee has received instructions and properly passed the examination. This sheet is also signed by the trainee as having received and fully understanding all of the items listed in the course of instructions. Once this has been completed, this sheet becomes a part of the trainee's file. The trainee is assigned to a job in a terminal and becomes then a trainee driver. Assuming he successfully passes this probationary period of one month, he is then used as a regular driver.

Refresher for Old Drivers

IN ADDITION to the individual instruction offered to all new drivers, we are at present giving the entire course, less Items 4, 5, 6, 7, and 8, to our old drivers in groups of 12. The excepted items, of course, had been previously covered. It takes about 15 hours to do this part of the job.

From the time a driver is assigned to the terminal a complete record is kept of every accident in which he is involved. A committee of company employees is maintained for voting on each accident as to avoidability or unavoidability. This committee consists of four drivers and a mechanic foreman so that avoidability is determined on every single accident, large or small. Committeemen do not know names of drivers on whose accident they cast their votes, nor do they vote on accidents they may have had.

The drivers making up these committees are constantly changed so that the greatest possible number of them know the voting procedure. These meetings are held in a number of our different terminals so that the procedure is learned by the greatest possible number of drivers.

Accident Cost Records

COMPLETE cost records are kept on every accident individually by drivers showing cargo losses, insurance company reserves and settlements, both on bodily injury and property damage, as well as cost of repairs to our own equipment when such repairs are made necessary by accidents. To indicate the detail, we charge the cost of time lost to each unit temporarily out of service due to an accident.

Complete records are also kept on every driver's failures in connection with handling freight, both pick-up and delivery. Drivers are constantly interviewed by our personnel manager who, having these records at his disposal, can discuss a driver's shortcomings in order to constantly better the driver's performance of his duty.

As a result of the company's thorough-going efforts in connection with its personnel work, the company believes that it has developed and is developing the finest group of drivers to be found in the motor transportation industry. No regular road patrol is maintained by the company for the reason that it is our belief that careful selection and thorough training make road patrol unnecessary.



Help Prevent Overspeeding and "Lugging" with

SUN ELECTRIC TACHOMETERS

Engine performance goes up and costs go down when your trucks are equipped with Sun Electric Tachometers.

These accurate engine speed indicators enable drivers to keep trucks operating at maximum efficiency. A glance at the easy-to-read dial tells when to shift gears, and when to speed up or slow down.

That means less engine wear . . . longer engine life. It cuts down expensive repairs due to improper engine operation.

Sun Electric Tachometers are easily mounted on steering columns or instrument panels. Each is factory-calibrated for use on your own make and model truck.

So . . . reduce costly engine wear with Sun Electric Tachometers. Ask your truck dealer or local Truckstell distributor to install this time- and money-saving accessory on your truck *today!* Or, for additional information, write directly to The Truckstell Company, Union Commerce Building, Cleveland 14, Ohio.



Approved AND DISTRIBUTED BY TRUCKSTELL
SPECIALIZED EQUIPMENT FOR PLUS PERFORMANCE

SUN ELECTRIC TACHOMETERS

Mfd. by SUN ELECTRIC CORPORATION, 6323 Avondale Ave., Chicago 31, Illinois





If you operate a fleet of trucks or buses, you are in a dilemma. Here's why:

a. If your equipment is kept on the road too long without being shopped, your equipment investment will suffer.

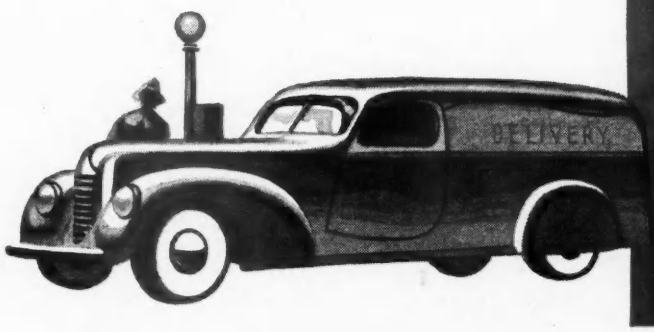
b. If your equipment is shopped too often, your equipment earnings go *down*—while your expenses go *up!*

Quaker State HD Oil helps on both counts.

Being a heavy duty oil, it lubricates better, longer, and gives more protection.

Being a double duty oil, it not only lubricates your engines, but cleans them, too—keeps working surfaces free from trouble-making sludge, gum, and sticky "varnish."

That's why Quaker State HD Oil can help you keep your equipment in better shape with less servicing. A trial will prove it.



IT'S QUAKER STATE HD OIL

QUAKER STATE HD OIL AND SUPERFINE LUBRICANTS

Use Quaker State HD Oil for trucks, buses, taxis, tractors
Use Quaker State Motor Oil for passenger cars

QUAKER STATE OIL REFINING CORPORATION · OIL CITY, PENNSYLVANIA

RuGLYDE SAVES TIRES, TUBES AND MANPOWER ON TRUCK TIRE CHANGING



ENDORSED AND USED BY CAR AND TIRE MANUFACTURERS, AND MAJOR OIL COMPANIES.

Fleet owners find RuGLYDE reduces tire maintenance costs. This 100% safe, non-petroleum, rubber lubricant speeds mounting and dismounting of bus and truck tires . . . and prevents tire and tube failures. RuGLYDE is recommended and used by major oil and tire companies and leading car manufacturers for both natural and synthetic tires and tubes for two main reasons:

1st, for *dismounting* stuck or rusted tires, RuGLYDE applied to both sides of tire along the edge of bead creeps in rapidly, loosens and lubricates so that removal is accomplished with less time, strain and fatigue for the service man, and without danger of damage to the bead and rim.

2nd, tires *mounted* with RuGLYDE give longer service. Pinching and chafing are prevented because RuGLYDE provides proper lubrication to seat tubes and flaps with minimum pressure so that they slip — not stretch — into place. RuGLYDE will not induce rim rust or cause tire static which injures tubes.

It's the scientific, ready-to-use, safe and economical rubber lubricant to *reduce tire and tube failures — lower labor costs.* Order from your jobber in 8 oz. applicator size refillable from one or five gallon sizes.

FASTER, SAFER TIRE CHANGING - ECONOMICAL, PAYS FOR ITSELF



MOUNTING — With a small cloth, apply RuGLYDE sparingly to areas of tires, tubes or flaps requiring a wet lubricant. DISMOUNTING — Apply RuGLYDE to both sides of tire along edge of rim. Allow few minutes for penetration, then proceed with removal.



AMERICAN GREASE STICK COMPANY

MUSKEGON, MICHIGAN

DRIVER SAFETY CLINIC

The Motor Truck Association of Southern California, in cooperation with the Teamsters Union has organized a Driver Safety Clinic bent upon reducing the accident rate and at the same time bolstering public sentiment toward highway carriers and the prestige of union membership.

Believed to be the first of its kind in the nation, the clinic will be governed by representatives of labor and management, a state or Federal official acting in a consulting capacity and a full time safety specialist. All drivers will be required to take the elaborate physical and driving tests offered by the clinic at least once a year.

ACCIDENT COSTS STUDIED

At the second meeting of the Highway Research Board's Committee on Economic Costs of Motor Vehicle Accidents held last month in Washington there was agreement that studies on economic costs must provide public administrators, safety officials and others with information to guide the expenditure of funds for accident prevention.

Three sub-committees were assigned to (1) develop further details for proposed case studies, (2) study existing methods and recommend a uniform technique for estimating accident costs, and (3) investigate specific types of accidents as an aid to estimating costs.

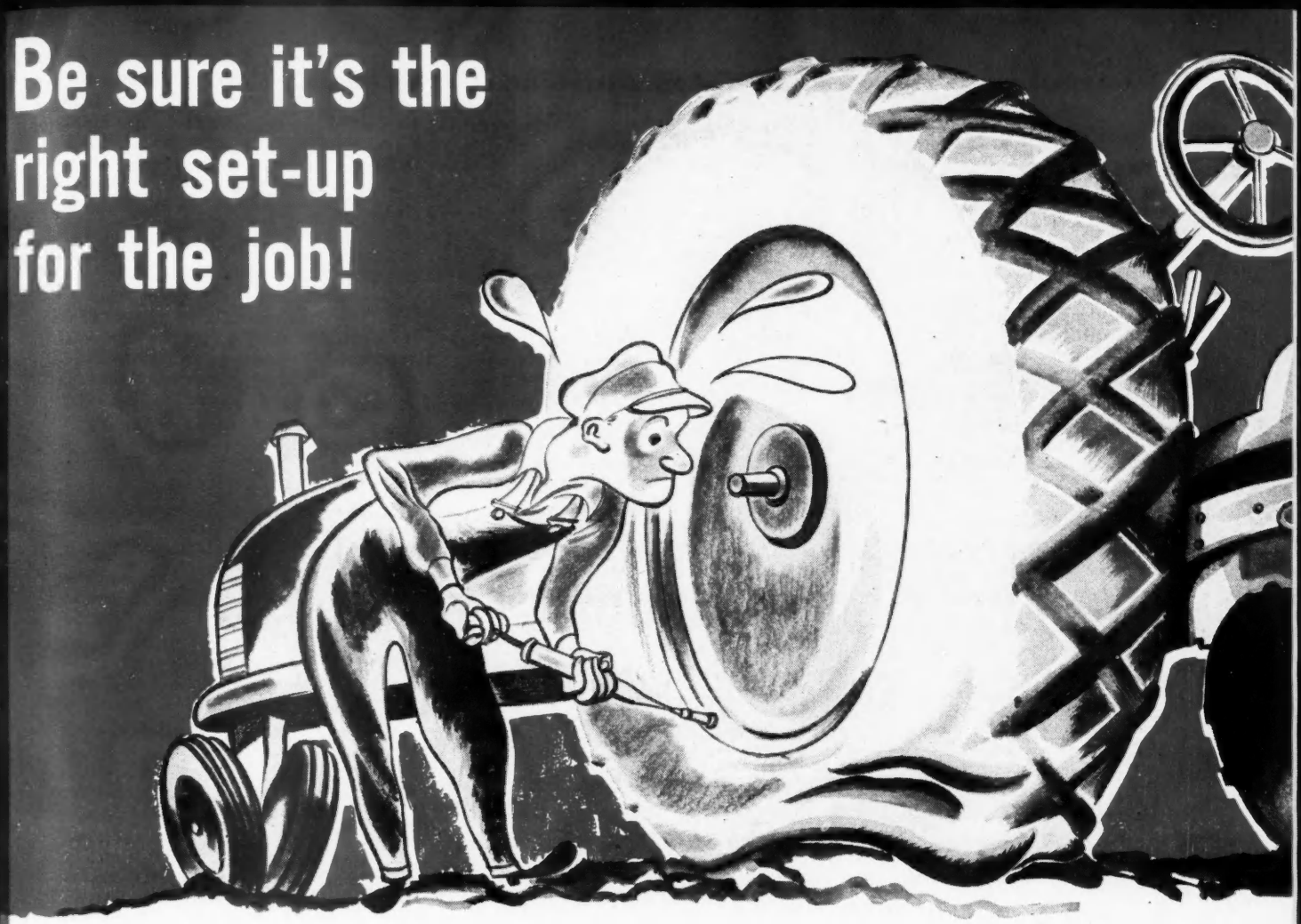


Posed with typical Florida fanfare these 12 mechanical-loading garbage disposal units on Mack chassis were delivered to City of St. Petersburg



Charles Goins, Roadeo straight-truck driving champion, now operates this "personalized" Chevrolet in his daily work for Trucking, Inc., Detroit

Be sure it's the right set-up for the job!



WHEN IT'S A QUESTION OF PISTON RINGS, American Hammered gives you the right set-up for *any* job! There are hundreds of American Hammered combinations, specifically engineered for the replacement field, for every engine condition. Among them you'll find the one set-up that is *just right* for the job, regardless of the degree of wear in any model of any make of engine. Those to whom efficient engine performance is the measure of piston ring value rely on American Hammered piston rings. Koppers Company, Inc., Piston Ring Division, Box 626, Baltimore 3, Maryland



Flexible Power Set

KOPPERS

American Hammered Piston Rings

General Electric Sees Silicone Paint and Lubes in Prospect

Can you expect a colorful, gleaming finish on commercial vehicle bodies to remain ageless—take the beating of heat and cold, ice and salt, acids and alkalis without any noticeable effect? Although you can't get it commercially yet, we are told by the General Electric Co. that it's not a pipe dream. They have been testing a finish of this kind based on Silicone resins and have found it good. So good that the new GE plant at Waterford, N. Y., hopes to be producing this finish within five years.

Silicone is not a new term. You have read about it in the past year or so and Silicone products of various kinds have been produced by GE and Dow-Corning Corp., for about four years, going mostly into war items until recently.

It's another of the magic tricks of modern chemistry. Starting mainly with sand, brine, and coal the chemist can cook up literally thousands of Silicones, although only certain types have useful applications. Silicones are a big family of products—like the human family—each one differing from another in certain respects but all having in common high resistance to the effects of heat and cold, ice and snow, salt and acids and alkalis.

Although decorative finishes are not in the cards for a few years, other types of Silicones are being produced in volume in useful forms—as lubes, as fluids for low and high temperatures, chemically resistant greases, insulating resins, and rubber-like materials.

Among the varnishes and resins made by Dow-Corning and GE are heat resistant paints which seem to be the answer to some serious truck operation problems. For example, they can be used for coating exhaust manifolds and mufflers and tailpipes. It's not a complete answer since the coating withstands temperature up to around 500 deg. F., whereas heavy-duty trucks may develop over 1000 deg. F. in the exhaust system. Nevertheless many jobs may not need greater protection. Looking ahead a little more, if Dow or GE can supply a heat resistant coating with enough flexibility to withstand press operations the makers of mufflers and tailpipes could buy steel sheet coated on both sides and then form them into the finished product. It would give protection against heat and corrosion on the inside and from weather on the outside. It is worth a try.

Silicone lubes and hydraulic fluids and greases all have the unique property of a flat viscosity curve (i.e., they retain a constant viscosity regardless of heat or cold). Some greases are designed for high temperature operations as in ball bearings in the presence of heat; others are designed for sub-zero operation. Whether such properties are essential in engine lubes is something to contemplate.

On the other hand they resist oxidation and sludging, flow freely at sub-zero temperatures and retain their viscosity up to 500 deg. F. You can't laugh off such qualities in a lube.

Some insulating varnishes in the Silicone group have high heat-resistance and waterproofness. Coating wiring harness and ignition parts with such materials produces a water-repellent surface that sheds water like a duck. If you treat tarpaulins or curtains or seat coverings with this varnish you get a surface that water simply can't touch.

Still another type of Silicone branches off into elastic rubber-like formulations suitable for molding, extruding, coating and laminating. In short a Silicone rubber. Dow-Corning calls it "Silastic." They are tough, flexible, resistant to heat. So far Silastic products have made their mark in particularly tough service such as for heat resistant gaskets, seals, diaphragms, and tubing.

This brings up the question: can Silicones be used for making tires. In the present state of the art—no. But the art is very new and is a long way from coming of age. It is possible that tires can be made successfully when and if Silicones with better mechanical properties are uncovered.

Silicones are real and useful and will bear watching in their application to the parts of commercial vehicles.

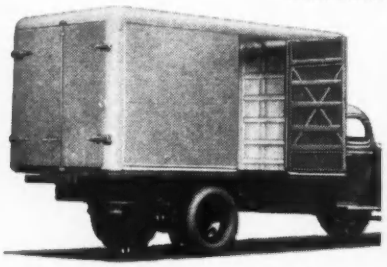
OLTMAN-O'NEILL *"Cargo-Tested"*

ALL-STEEL TRUCK BODIES

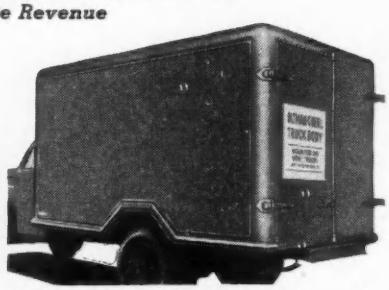
Mass Produced for Economy and Volume Orders

Immediate Delivery

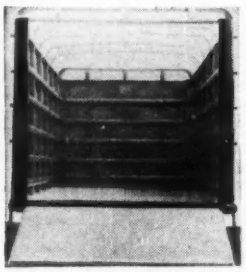
Mounted on New Truck Ready to "Pay Own Way" in Immediate Revenue



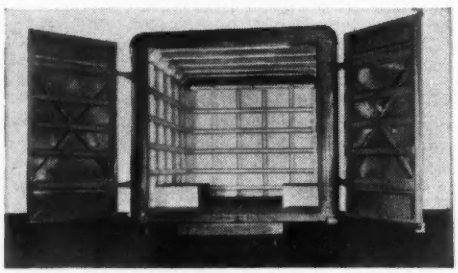
Standard Van with side door



Wheel House Model (9" lower)



Open top with tailgate



New "X"-Braced Doors

MANY MODELS

9-12-14-16 foot lengths . . . inside measure in Standard vans or Wheel House Models. Built to specifications for side doors, tailgates, double rear doors, or ¾ doors over tailgate, called "Dutch" doors.

TOP QUALITY

All-steel . . . All-welded . . . Rigid grid frame . . . Leakproof steel roof or open top . . . Nonskid steel floor. New "X"-braced doors . . . "Full length" interiors..."Equal clearance" Wheel Housing . . . Smooth sides . . . Painted to match cab and chassis.

Sold by Truck and Equipment Dealers

Ask us for name of dealer nearest you

OLTMAN-O'NEILL CO.

5171 Martin Ave.
Detroit, 10, Mich.
TA. 5-0502

"TRUCK BODIES THAT PAY—*ALL THE WAY*"

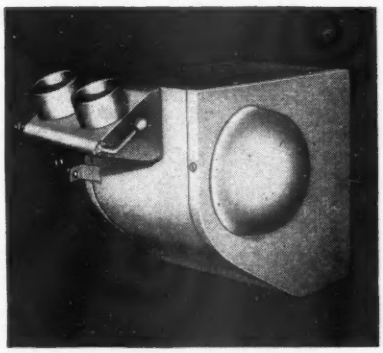
IMPORTANT REFERENCE PAGE FOR FLEET OPERATORS AND MAINTENANCE SUPERINTENDENTS

★ CHECK IT, ACT NOW—AND FILE FOR FUTURE REFERENCE

EVANS TRUCK-CAB HEATERS

Engineered for Safety, Efficiency, Complete Driver Comfort

FULL VISION AT ALL TIMES WITH EVANS SUPERIOR DEFROSTER EQUIPMENT



STANDARD CAB HEATER

Model AD-10—Built for durability and dependable service and featuring bus type motor and core. Operating efficiency proven by thousands of installations. Air distribution controllable.

Today's Evans heaters are the finest developments of the world's largest manufacturer of truck and bus heating and ventilating equipment. They are top-quality products in engineering, materials, workmanship.

High-pressure motor-fan combinations and large heater cores assure defrosting and maximum driver comfort. Write us or consult local distributor.

★ ★ ★

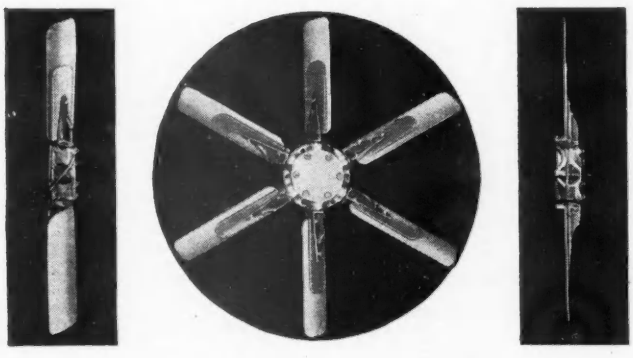


DELUXE CAB HEATER

Model MD-10—with 50% bigger core area and 50% more air distribution—this model provides the ultimate in truck cab comfort for that extra-large cab heating requirement. Controlled directional air distribution.

EVANS THERMO-CONTROL FAN*

Automatically Maintains Engine at Correct Operating Temperature



Fleet operators, using gas or diesel equipment, can increase operating efficiency and reduce costs with Thermo-Control Fans. Fan blades automatically change pitch, as operating conditions change, to supply the exact amount of cooling air needed to maintain any predetermined engine temperature. Increases horsepower, reduces crankcase sludge and cracked blocks, saves on fuel, oil and maintenance costs. Write for booklet or free consultation with Evans engineers.

*T. M. Reg. U. S. Pat. Off.

EVANS PRODUCTS COMPANY
PLYMOUTH, MICHIGAN

THERMO-AIRE EVANS DIVISION

OTHER EVANS PRODUCTS—AIRFOIL FANS • BATTERY SEPARATORS DOUGLAS FIR PALLETS • *AUTO LOADER • *UTILITY-LOADER • SKY PRODUCTS • STAMPINGS • MOLDED PLYWOOD • WATER HEATERS SPACE HEATERS • VENETIAN BLIND SLATS

New Products

(CONTINUED FROM PAGE 208)

P240. Engine Washer

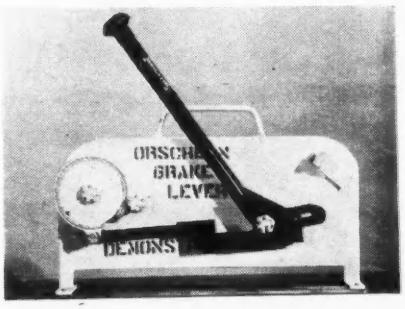
A new product is the portable Kleer-Flo Hydromaster for spray gun washing of engines or chassis. Designed for filling station and service shop use, this product is being manufactured by Practical Products Co., Minneapolis, Minn.

The Hydromaster features a combination refill and safety cap which releases pressure gradually as the cap is unscrewed. The heart of the unit is the adjustable spray gun, using a cleaning compound which saturates and penetrates all residue, making it relatively simple to flush off with a water hose. The spray gun features a volume adjuster, a rate-of-flow control handle, and a non-leaking tip for efficient use, avoiding waste and mess. It can also be used to keep service floors and equipment clean.

Use Free Postcard For More Details.

P241. New Brake Lever

A new type brake lever has been placed on the market by the Alken Co., Moberly, Mo. Designed to make actuation easier and application safer, the Orschelm brake lever operates on the over-center or boomer principle. Consisting of a tubular lever, an adjusting device and the patented over-center mechanism, the brake lever multiplies pressure applied ten times to give positive and easy application of the emergency brake, the manufacturer states.



Another feature claimed for the lever is an improved adjusting procedure. With a twist of the knob on the handle, excessive slack is taken up, and further adjustment of the band is unnecessary. The knob is adjustable to 1/64 in.

The lever can be mounted on practically any conventional emergency brake mechanism in about an hour, according to the manufacturer. It will operate on either drive shaft or axle brakes and is said to make parking safe in that it cannot be jarred loose after it is set.

Use Free Postcard For More Details.

P242. Sound Deadener

Mortex, a sound-deadener used in the automotive industry, is now available from the J. W. Mortell Co., Kankakee, Ill. This material is sprayed on the underside of the hood, fenders, running boards, gas tank of old and new cars and trucks, with the result that vibration noises, and rattles are deadened. It is also ideal as a protection against rust, road throw, stones and road salts, according to the company.

Use Free Postcard For More Details.

P243. Carburetor Cleaner

A new cleaner and solvent for de-gumming carburetors has been placed on the market under the trade name of Expel-It, developed by the Excelo Mfg. Co., Alhambra, Cal.

The solvent is poured into the air horn of the carburetor with the engine running slightly higher than normal speed. An additional 8 oz. of the solution is poured into the gasoline tank. The gum in the manifold, fuel pump float bowl and jets is dissolved within a short time, according to the manufacturer.

Use Free Postcard For More Details.

P244. Surface Grinder

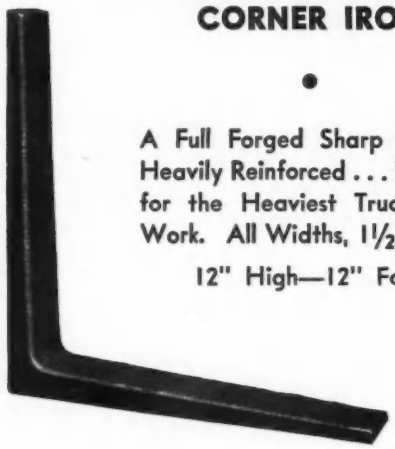
No set up is necessary to grind cylinder heads and blocks to within .001 in. on the new Peterson surface grinder designed by Peterson Welding Laboratories, Kansas City, Mo.

Cylinder heads and blocks can be ground by an unskilled operator by simply guiding the casting back and forth across the grinding wheel, according to the company. On this surface grinder the grinding stone is mounted level and the table top is also level.

(TURN TO PAGE 238, PLEASE)

"Cleveland"
CORNER IRONS
FROM 1½" TO 3" WIDE

No. 2485
HEAVY DROP FORGED
CORNER IRON



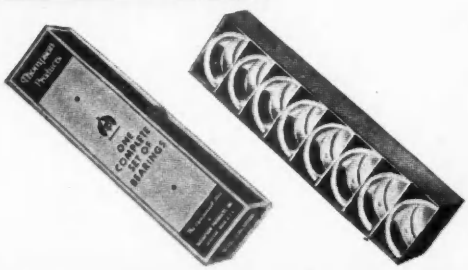
A Full Forged Sharp Corner, Heavily Reinforced . . . Suitable for the Heaviest Truck Body Work. All Widths, 1½" to 3".
12" High—12" Foot.

● "Cleveland" Range of Corner Irons Covers Every Size and Style

SEND FOR CATALOG 22B

The Cleveland Hardware & Forging Co.
Established 1887
3264 East 79th St. Cleveland 4, Ohio





IT PAYS TO CHECK ALL ENGINE BEARINGS as well as piston rings when an engine is pumping oil. Worn bearings throw excessive amounts of oil on cylinder walls with each turn of the crankshaft. When this happens, oil is burned up — wasted, whether or not new rings have been installed.

Excessive clearance of only .006" in a worn bearing can cause an oil flow *20 times* more than normal!

Thompson Engine Bearings are the original equipment leaders—the modern thin-wall, steel-back type. They are engineered to tolerances of *two and a half ten-thousandths of an inch.* Their accuracy and mirror-like finish permit easy, slip-in installation.

The Original Equipment Line

See Your **Thompson Products** *Distributor*

Cleveland • Detroit • Los Angeles • St. Catharines, Canada

New Products

(CONTINUED FROM PAGE 236)

Tip toe control by means of a spider wheel permits the operator to raise the stone a maximum of 2 in. to the grinding level, leaving both hands free to handle the work. A 16-in. suction fan bolted to the under side of the grinding wheel pulls grinding dust down and deposits it in two dust collectors.

The grinder comes in two models: 1A, equipped with 14-in. stone and 3-hp. motor; and the 2A, equipped with a 16-in. stone and 5-hp. motor.

Use Free Postcard For More Details.

P245. Heavy-Duty Tire

The General Tire & Rubber Co. has titled its new off-the-road tire the "LCM," which combines the first letter of the logging, construction, and mining work this tire is built to perform.

Now approved for production, the LCM is built to operate under extreme load conditions, and has been engineered to develop tremendous pulling power through sand, mud, rock, or gravel. Other features include: (1) deeper, heavier tread to protect against snags, and cuts; (2) reinforced heavy-duty shock-absorbing shoulders; (3) miles more of rayon cord in all sizes; (4) self-cleaning cleats that converge for easier riding on the highway, and (5) heavy dual and triple beads.

Production is now under way in seven sizes, ranging from 7.50 x 20 through 21.00 x 24.

Use Free Postcard For More Details.

P246. Filter Element

Standard equipment for all types of lubricating systems is the new Engine-Life Oil Filter Element manufactured by Engine-Life Products Corp., El Monte, Cal.

Replacement filters consist of lint-free textiles wrapped in a closely knit muslin, pressure wound in convolutions around a perforated metal core, and covered with a heavy tubing or muslin jacket. The horizontal flow of oil from outside to inside through the laminated construction materially increases dirt and sludge removal. As elements absorb contaminants they expand, allowing greater dirt storage capacity and a higher saturation point than elements in metal containers.

Engine-Life Filters will not rob oils of their valuable additives, according to the company. They may be used with any type of oil, regardless of its use or application. Replacement elements are available in 260 different sizes to fit all popular makes of filter cases. No adapters, springs, spacers or liners are necessary to make them fit.

Use Free Postcard For More Details.

P247. Agitated Degreaser

Development of a new product for automotive parts maintenance has been announced by Practical Products Co., Minneapolis, Minn.

The Kleer-Flo Powermaster, a power-agitated degreaser for heavy-duty automotive and industrial cleaning, is designed to "hot wash" an entire engine block in one operation. A washing pressure in the heated cleaning compound is created by rapid vertical strokes of the motor-driven rack. Using Kleer-Flo HI-T GREASOFF Cleaning Compound, grease and grime are flushed off quickly according to the manufacturer.

The Powermaster can also be used for cold washing of quantities of small parts such as carburetors, fuel pumps, brake shoes, or clutch assemblies.

Use Free Postcard For More Details.

P248. Brush Conditioner

A complete outfit for reconditioning paint brushes has been developed by the Wisconsin Laboratories, Inc., Milwaukee, Wis. The device consists of a container in which the brushes hang and are surrounded by a vapor produced by a special vaporizing fluid. The vapor is a solvent for paint, enamel, lacquer, varnish or shellac in the brush so that brushes become thoroughly softened in a short time, according to the company.

The container will hold about six brushes of the size ordinarily used in the shop.

Use Free Postcard For More Details.

END

(Please resume your reading on P. 105)



In addition to our regular production of 20" wheels, we are now accepting orders for

DUAL TRAILER WHEELS

(to fit Timken axles) in 22" diameter for June delivery and in 24" diameter for August delivery. Heat-treated cast steel . . . continuous web design for maximum strength and bearing support . . . polished aluminum hub . . . assemblies include famous GUNITE Brake Drums.

THE GUNITE WHEEL LINE IS NOW COMPLETE.

MADE BY
GUNITE FOUNDRIES
ROCKFORD, ILLINOIS



GUNITE CAST STEEL WHEELS . . . GUNITE BRAKE DRUMS . . . FOR LONGER LIFE

NOW . . . FINER BECAUSE THEY'RE FORGED ☆



FORGED FITTINGS ARE TOUGHER

Forged fittings stand up better under hard knocks, mechanical shock, and vibration because forging concentrates fiber-like flow line structure of metal at points of stress.

FORGED FITTINGS ARE STRONGER

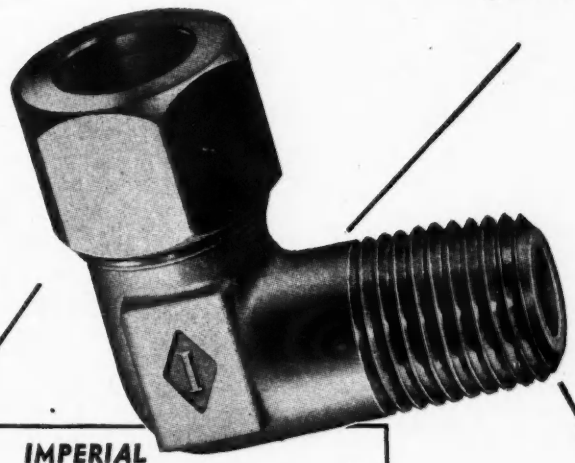
Brass forgings are over 80% stronger than brass castings — that's why forged fittings will withstand higher pressures.



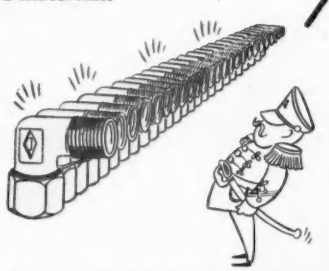


FORGED FITTINGS ARE CLOSER GRAINED

The extremely close-grained structure of forgings assures against blow holes or other concealed defects and against seepage of even hard-to-hold materials.

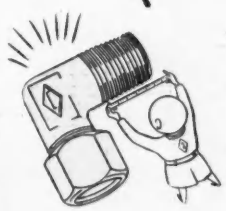


IMPERIAL TUBE FITTINGS for gas, oil, and brake line work.



FORGED FITTINGS ARE MORE UNIFORM

Dimensions of forgings are held within extremely close limits—far closer limits than are possible in the case of castings. This makes fittings easier to install.



DRYSEAL PIPE THREADS

Full length SAE Dryseal Pipe Threads are being incorporated on pipe thread ends. These threads make tight joints without pipe dope; are longer on sizes ¼" and over.

☆ Elbow and tee bodies on Compression, Flared, Hi-Duty, Flex and Inverted Flared Tube Fittings are being converted to forgings. Straight fittings made from brass rod.

SEE YOUR JOBBER

Write for Bulletin No. 349 on Forged Fittings

IMPERIAL leads again with an important step forward in tube fitting quality. These new Imperial fittings for gas, oil and brake line work have forged bodies on elbows and tees and SAE Dryseal Pipe Threads on pipe connections.

All the advantages above combine to bring you something far better in tube fittings. Now, more than ever before the Imperial Diamond "I" on fittings is your assurance of top quality.

THE IMPERIAL BRASS MANUFACTURING COMPANY
1209 West Harrison Street, Chicago 7, Illinois

IMPERIAL

BRASS FITTINGS • FLEXIBLE FUEL LINES • TUBE WORKING TOOLS • BATTERY HYDROMETERS BARREL FAUCETS • WELDING EQUIPMENT



A Hockey Goalie Has Special Equipment . . .

YOUR CARS AND TRUCKS NEED

PURITAN *Super 60* BRAKE FLUID

The goalie on a hockey team has special equipment because his job is a specialized one—tougher than that of the rest of the team. In the same way your commercial cars and trucks need a special brake fluid to withstand the exceptionally severe service they undergo.

Puritan Super 60 Hydraulic Brake Fluid was developed just for this heavy duty service. It is especially compounded from organic materials to have all the features and characteristics needed for commercial car and truck operations.

BOILING POINT 370 F: No danger of brake failure due to vaporization.

POUR POINT 60 F BELOW ZERO: Remains free flowing and mobile even in Arctic weather.

NON-GUMMING AND NON-OXIDIZING: Has a special base that does not gum or oxidize under any operating conditions.

MOISTURE ABSORPTION: Capable of absorbing all moisture of condensation—thus protecting wheel cylinders and metal parts against corrosion.

INERT TO RUBBER: Does not cause rubber cups to swell or deteriorate.

MISCIBLE: Mixes completely with all other brake fluids. Safe to add to any hydraulic brake system.

For longer periods between brake fluid servicing, for assurance of trouble-free operation, be sure to use Puritan Super 60 Hydraulic Brake Fluid. You can start getting the benefits now by adding it to your line whenever fluid level is low because it mixes with all brake fluids. To get a clean start, it's better to flush out old, gummy brake fluid with Puritan Hydraulic Brake Flushing Fluid and refill with long-lasting Puritan Super 60 Brake Fluid. You can get a supply of both from your NAPA jobber today.



PURITAN COMPANY, INC.
ROCHESTER 6, NEW YORK
HYDRAULIC BRAKE FLUID AND FLUSHING FLUID • GASKA-SEAL NO. 1, 2 AND 3
SHOCK AND KNEE-ACTION OIL

NAPA
Assurance of Quality

Washington Runaround

(CONTINUED FROM PAGE 140)

Safety Section Reviews Truck Design Problems

Perhaps the most far-reaching step taken by the Section of Safety in recent years is the inauguration of a series of conferences with the truck industry to discuss mutual problems of design and construction, particularly those features reflected in accident records. This move is particularly significant in view of the increase in the number of accidents due to mechanical defects.

The first meeting with the truck manufacturers was held in Detroit recently, and it is planned to continue such conferences on an annual basis. Every major truck producer was represented, and the ICC reports complete cooperation on the part of the industry. The manufacturers were willing to comply with any suggestions which would lead to greater safety as soon as desired features in construction could be worked out and mutually agreed upon.

Such meetings have been held with the bus manufacturers in the past, but the meeting in Detroit was the first covering trucks.

The problems discussed at this meeting give some idea of what can be accomplished by such an undertaking. The discussions centered around the following topics: front-wheel brakes; better hand brakes; brakes on tractors that would remain operative in cases where the truck-trailer breaks away; new specifications for fuel tanks; push-out windows; standardization of bumper height, in connection with placing rear bumpers on trucks and trailers; confining sleeper berths strictly to vehicle cabs; and the allotment of space for a kit to hold all emergency equipment, including a spare sealed beam head lamp.

The Section of Safety is currently trying to determine how long it will take the industry to put into practice any of these changes, once agreement has been reached.

While the results of this meeting will have some bearing on the overall revision of the safety regulations, the meeting was not called for this specific purpose. In fact, many of the problems discussed have no relation to the safety regulations. Also bearing out this point is the ICC proposal to hold such meetings on an annual basis.

END

(Please resume your reading on P. 154)

STUDEBAKER'S AD WINS

Studebaker's series of truck advertisements emphasizing traffic problems and safety measures has been awarded one of three prizes for 1946 advertising carrying "social force."

In citing the series for honorable mention the trade magazine, *Advertising and Selling*, said: "Reports show high observation and readership. In addition, there has been favorable editorial comment by leading newspapers and magazines and many government, civic and safety officials have expressed their approval in letters and statements to the advertiser."

STOP being ROBBED OF BIG TIRE MILEAGE!



Why let these invisible "STEERING WOBBLIES" rob you of thousands of tire miles? Wobblies, caused by out-of-line wheels, get into every car sooner or later through road bumps, curb scuffs, and worn steering parts. They literally saw the life out of your tires...cause blowouts and accidents, too!

TIRE SAVINGS ALONE will pay for the entire cost of this **LIFE SAVING SERVICE!**

BEAR STEERING SERVICE FRAME & AXLE STRAIGHTENING

Published in the interest of Public Safety and Automotive Service Establishments equipped to offer Bear Service, by the BEAR MFG. CO., ROCK ISLAND, ILLINOIS

WITH **BEAR** SAFETY SERVICE

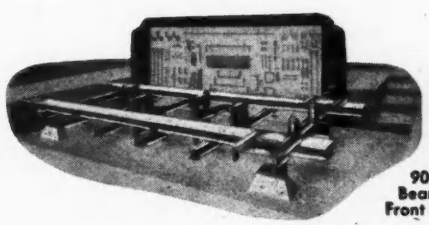
Rising COSTS-PER-MILE

—Make this Bear Money-Saving Message from the POST more important than ever before for FLEET OPERATORS

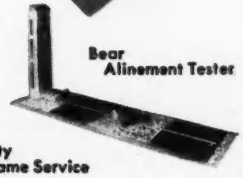
Bear Service always has been a big cost-reducer for Fleets. Under today's conditions, with cars and trucks overage, with synthetic tires and recaps, it's easier than ever for the Steering "Wobblies" to crawl in and do their damaging, dangerous, costly destruction. Stop 'em FAST with Bear Safety Service by making arrangements with a shop that displays the Bear Sign... or by installing Bear Equipment in your own shop. Then watch that cost-per-mile go DOWN ...Down... down. Write BEAR MFG. CO., Dept. C-3, Rock Island, Illinois.



Bear Heavy-Duty Dy-Namic Wheel Balancer



900-830 Bear Heavy-Duty Front End and Frame Service



Bear Alinement Tester



INTRODUCING . . .

. . . H. W. JACKSON as service manager of Bendix-Westinghouse Automotive Air Brake Co. He succeeds D. H. ROBINSON, transferred to the manufacturing division where he will head several production phases. J. W. COCKRUN is new assistant service manager.

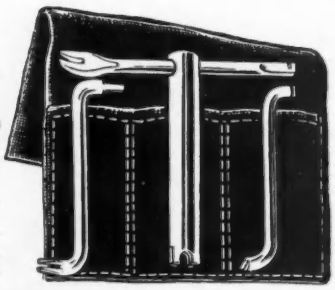
. . . OSCAR HELFER as director of sales operations for Seiberling Rubber Co. COL. J. L. COCKRUN remains as vice-president in charge of sales.

. . . JOHN S. WALKER as manager of General Tire & Rubber Co.'s new St. Louis branch. He is succeeded at Memphis by J. G. TAYLOR. RICHARD F. BLUNDIN now heads the Philadelphia branch.

. . . CHARLES M. BROWN as sales manager for the American Coach & Body Co., Oakland, Cal.

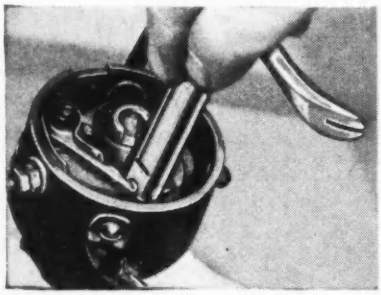
. . . J. E. BAIN as manager of White Motor Co.'s New York branch. W. M. TOBIN replaces him as head of Brooklyn branch.

3 tools with 5 handy uses..
Lanagan's TUNE-O-KIT

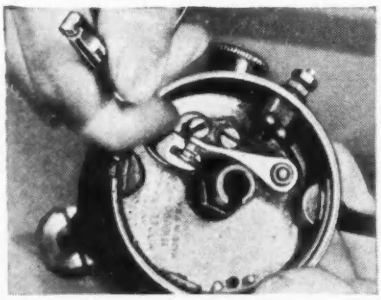


The TUNE-O-KIT consists of a Contact-Aligning Tool, a Voltage Regulator Adjusting Tool, and a Ford V-8 Contact-Adjusting Tool. All three tools are made from cadmium-plated hardened tool steel, and are packaged in a convenient canvas carrying case.

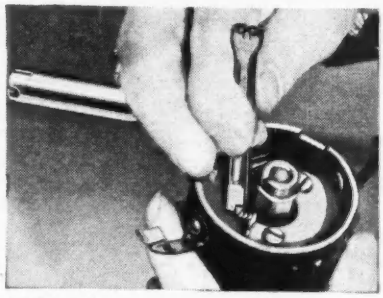
FIVE USES...



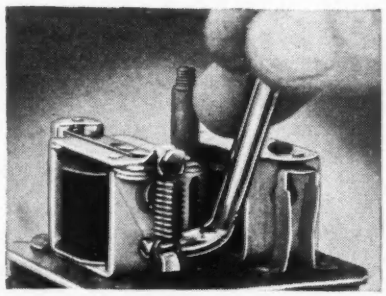
1. Use the three-purpose tool as a stationary contact aligner . . . for Delco-Remy or Autolite distributors.



2. Use the three-purpose tool to raise the stationary contact.



3. The three-purpose tool has just the right weight and balance for bending the high-speed contact arm.



4. Use this tool to bend the spring anchor to the exact degree desired. For any voltage regulator. Slots at right angles to each other double the tool's usefulness.

5. The handy offset screwdriver (not illustrated) is needed for work on Ford V-8 distributors (1937 models on). Right-angle bits make access doubly easy.

Lanagan & Hoke *PHILADELPHIA 44, PA.*
Precision Automotive Testing Equipment



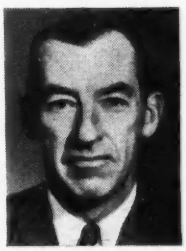
. . . M. O. STOCKLAND, JR. as joint manager of sales promotion and advertising for The Four Wheel Drive Auto Co. Francis M. Higgins, former advertising manager has retired.



. . . GEORGE M. JENKINS as manager of truck tire sales for the Firestone Tire & Rubber Co. His most recent position with Firestone was that of Milwaukee district manager.



. . . E. B. HILL as director of factory sales for Gar Wood Industries, Inc. He was formerly district manager in Chicago.





. . . Chevrolet's new Regional Managers, J. E. SIMMONS (left) for the Atlantic Coast and R. C. MEDDAUGH at Chicago. Simmons was former Great Lakes regional manager while Meddaugh comes from Detroit where he was national manager of fleet sales

(TURN TO PAGE 246, PLEASE)



THINK FIRST OF *Monmouth*

Monmouth Tie Rod Ends—Drag Links, Tie Rods, Shackles, Wheel Suspension Parts and King Bolt Sets are all built to original equipment standards.

The line is complete for all popular make cars and trucks; in fact, for any automotive application, ask for Monmouth Chassis Parts—packaged in distinctive Monmouth boxes for ease in identification and handling. Distributed through N.A.P.A. Warehouses coast to coast to provide the most economical service to the repair garage. Ask your jobber for Monmouth Chassis Parts—the distinctively packaged line.

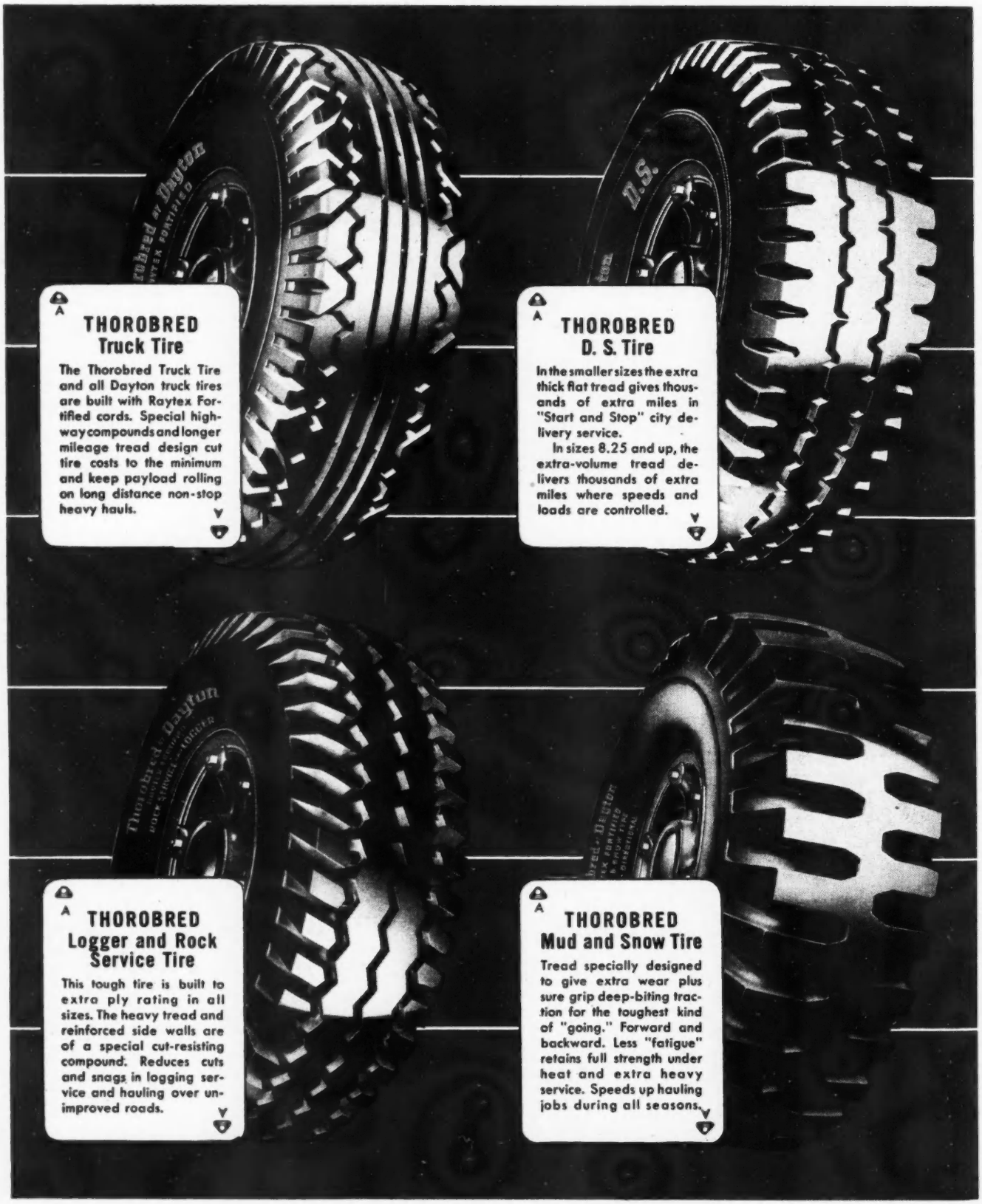
Your NAPA Jobber is a Good Man to Know!

MONMOUTH PRODUCTS COMPANY • CLEVELAND, OHIO

FOR ENGINE BEARINGS
CLUTCH PLATES AND PARTS
CHASSIS PARTS

Monmouth Trade Mark *is the name*

Mr. Truck Owner



THOROBRED Truck Tire

The Thorobred Truck Tire and all Dayton truck tires are built with Raytex Fortified cords. Special highway compounds and longer mileage tread design cut tire costs to the minimum and keep payload rolling on long distance non-stop heavy hauls.

THOROBRED D. S. Tire

In the smaller sizes the extra thick flat tread gives thousands of extra miles in "Start and Stop" city delivery service.

In sizes 8.25 and up, the extra-volume tread delivers thousands of extra miles where speeds and loads are controlled.

THOROBRED Logger and Rock Service Tire

This tough tire is built to extra ply rating in all sizes. The heavy tread and reinforced side walls are of a special cut-resisting compound. Reduces cuts and snags in logging service and hauling over unimproved roads.

THOROBRED Mud and Snow Tire

Tread specially designed to give extra wear plus sure grip deep-biting traction for the toughest kind of "going." Forward and backward. Less "fatigue" retains full strength under heat and extra heavy service. Speeds up hauling jobs during all seasons.

Here's Dayton's Proposition *to You*

Just try THOROBREDS on your toughest job . . . Then judge their service by your books.

- With DAYTON THOROBREDS and DAYTON MAINTENANCE SERVICE we know your books will show much lower tire costs.
- Because DAYTON THOROBREDS will haul more tonnage, more miles, at less cost per mile.
- You'll get safer, trouble free tire performance and cut expensive road delays.
- Sure we have an ace up our sleeve when we make this proposition. Four aces in fact. They're all on the table, face up. Use 'em. You can't help but win.

Try the Bookkeeping test on

THOROBREDS by

Dayton



THE DAYTON RUBBER COMPANY • DAYTON 1, OHIO

Use postage-paid card inserted at page 103 for free information on advertised products

Introducing . . .

(Continued from Page 242)

. . . HENRY ROWOLD as assistant general sales manager of Mack-International Motor Truck Corp.

. . . W. H. KNEASS as Chicago district manager for U. S. Tire Div., United States Rubber Co.

. . . LEONARD C. ANDERSEN as manager of District 8 (Cal., Ariz., Nev.) for The Heil Co. with headquarters in Los Angeles and HERMAN WAGEN as district sales manager for the north central states with headquarters in Milwaukee. CARL MINDEMANN is sales coordinator in Milwaukee and TOM BOYLE has been transferred to the same office.

. . . JACK C. GAY as sales engineer for Hercules Steel Products Co., Galion, O., and VERNON R. TEASLEY as west coast representative.

The ORIGINAL SILVER* ELECTROMATIC NEUTRALIZER Saves Your Radiator Life!



*Heavily Silver Plated On Copper.

Eliminates Scale in Car • Truck • Fleet

SOLVE YOUR RADIATOR PROBLEMS With the *original* Silver Electronic-Action Neutralizer! First in the field, and still the best, the Electromatic Neutralizer stops corrosion, pitting and scale formation easily, quickly, at a trifling cost, and without the use of chemicals.

The Electromatic Neutralizer creates, through hot water, an electrolysis. No moving parts get out of whack. The Electromatic Neutralizer does the complete cleaning job all alone. Install an Electromatic Neutralizer today—and watch it go to work at once to save you money and trouble!



EASY TO INSTALL

Just loosen the top water hose radiator connection. Slip in the Electromatic Neutralizer. Springs hold it in place. Replace hose. Start your engine. The Electromatic Neutralizer goes to work! Guaranteed.

See Your Dealer—Or Write Or Wire
ELECTROMATIC ENGINEERING COMPANY, INC.
655 South 2nd Street
Louisville 2, Kentucky

. . . HARRY A. FRICK who retires after 44 years with International Harvester Co. For over 30 years he had been with the Chicago motor truck branch, most recently as manager of sales.





. . . E. P. FEELY as national manager of fleet sales for Chevrolet with offices in Detroit. He was formerly asst. manager of the Atlantic coast region.

. . . WARREN A. KNECHEL as Federal Motor Truck regional sales manager for eastern Atlantic seaboard from Boston to Washington, D. C. His headquarters are at Trenton, N. J.





. . . A. T. GIBSON as assistant to the president, Kelite Products, Inc., Los Angeles. During the war he served as civilian adviser with the U. S. Engineers.

. . . J. A. CORTRIGHT as general sales manager, The Clayton Mfg. Co., El Monte, Cal. He has been sales manager of Kerrick Cleaner Div. since 1941 and succeeds L. F. Working, retired.

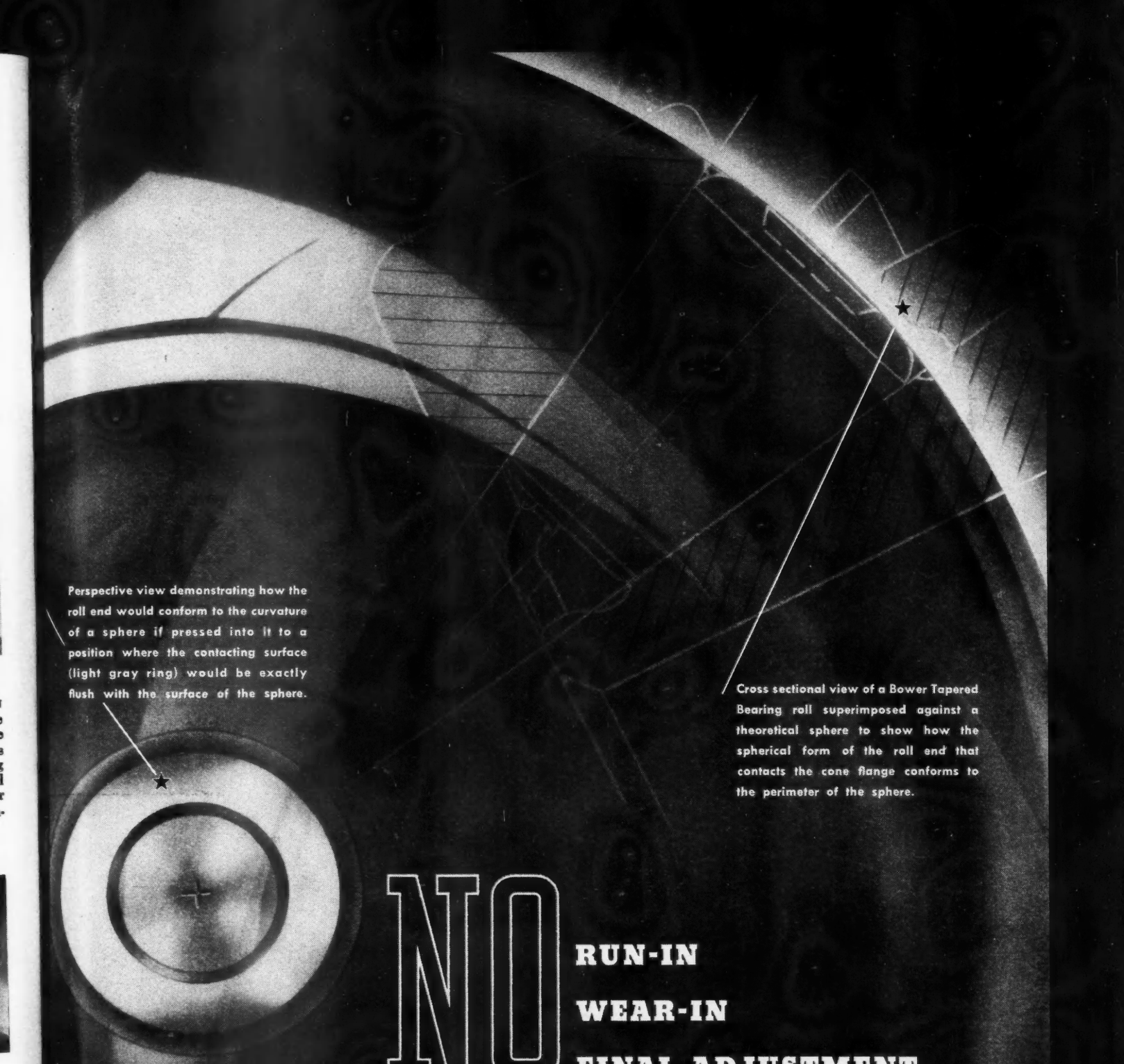






. . . PHILIP SOMMERLAD (left) as general sales manager and R. G. RILEY as merchandising director for Thompson Products' Service Division. Sommerlad comes from Motor Parts & Supply Co., Jacksonville; Riley has been with the company since 1935

(TURN TO PAGE 248, PLEASE)



Perspective view demonstrating how the roll end would conform to the curvature of a sphere if pressed into it to a position where the contacting surface (light gray ring) would be exactly flush with the surface of the sphere.

Cross sectional view of a Bower Tapered Bearing roll superimposed against a theoretical sphere to show how the spherical form of the roll end that contacts the cone flange conforms to the perimeter of the sphere.

NO RUN-IN WEAR-IN FINAL ADJUSTMENT

Bearing roll heads will ultimately wear themselves down to spherical form where they operate against the flange. The flange will also wear itself down to inverse spherical form (concave) to exactly fit the roll head • The action is commonly known as "wearing in" or "running in" and must be followed by a "final" adjustment to take up the "play". Both are costly disadvantages • Bower Spher-O-Honed Bearings are so designed and processed that the "ultimate" spherical contour of the contacting roll ends is formed *before* bearings are installed. Being so processed, these surfaces take the form of a segment of a true sphere. For this reason, Bower Tapered Roller Bearings can be permanently installed without the necessity of wearing-in, running-in or final adjustment • This important advantage is attained by the use of processing machinery exclusively designed and built by Bower engineers. Numerous advantages are the result—among them rigid roll alignment, smooth, quiet operation, better lubrication and long, trouble-free service.

BOWER TAPERED SPHER-O-HONED ROLLER BEARINGS

TRADE MARK

BOWER ROLLER BEARING COMPANY • DETROIT 14, MICHIGAN

Introducing . . . (Continued from Page 246)

. . . JOSEPH P. GLOVER as executive secretary of the National Wheel & Rim Association with offices at 208 W. St. Clair St., Cleveland.

. . . GORDON J. WYGANT as assistant sales manager for Titeflex, Inc., Newark, N. J.

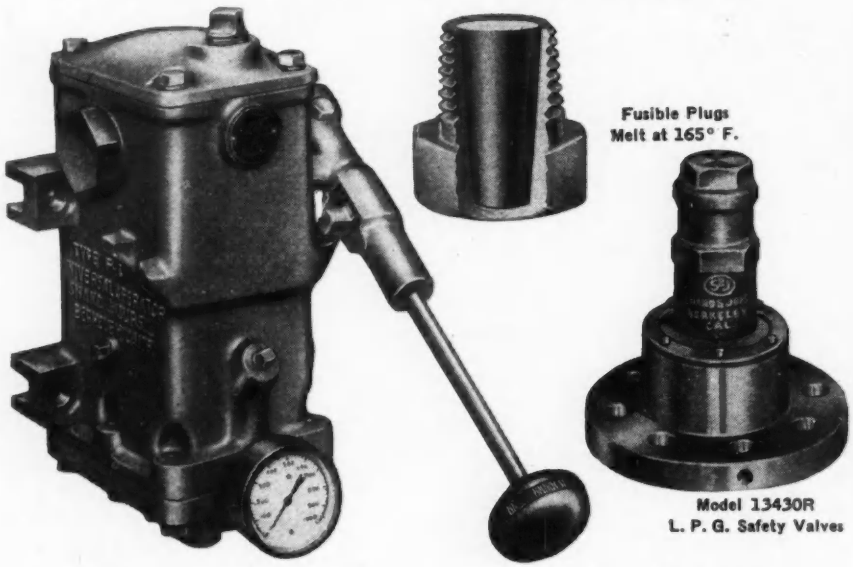
. . . R. L. FLANNIGAN and LIONEL A. SANGER as sales representatives for the Hygrade Products Co., Inc., Long Island City, N. Y. They will operate from Indianapolis and Kansas City respectively.

. . . JOSEPH DEL GRECO as sales representative for K-D Lamp Div., Noma Electric Corp., covering western Ohio, northern Kentucky and southern Illinois.

. . . PERRY L. FRANCIS, general manager of sales for Alan Wood Steel Co., Conshohocken, Pa. He succeeds WILLARD S. HARDING, deceased, as head of sales department.

. . . MORGAN B. LAWTON as Detroit branch manager for Lincoln Engineering Co.

HYDRAULIC SAFETY VALVES
FOR L.P.G. TRUCK TANKS



The S. & J. Safety Valve System for L. P. G. truck tanks consists primarily of hydraulic discharge valves, normally held closed by spring tension. They are actuated by hydraulic pressure created by a few strokes of the Hydraulic Operator. Valves are held open during discharge operation by hydraulic pressure, and fusible plugs inserted in the pressure line release the pressure and automatically close the valves in event of fire. The operator is available with a "Deadman" control lever, making it mandatory that driver stand by operator and keep his finger on "Deadman" to maintain valves in open position. Can be equipped with a trip which releases hydraulic pressure automatically when can doors are closed, or making it impossible to pump up hydraulic pressure until truck brakes are set. Write for special L. P. G. Bulletin.

SHAND & JURS CO.
BERKELEY, CALIFORNIA

New York Chicago Houston Los Angeles Seattle

SHAND & JURS

. . . WILSON C. BUTCHER as sales representative in Kansas City for Commercial Solvents Corp. FRED W. FITCHEN and JAMES S. WEBSTER, JR., have been assigned to the New York office.

. . . J. H. MCDONALD and CLARK W. NEIMAN as manager and assistant manager, respectively of Ford Motor Co.'s Omaha sales district.

. . . S. E. LONG as assistant district manager at Dallas for Goodyear Tire & Rubber Co. He is replaced at Akron, where he was truck tire salesman, by HARRY H. KINZY of New Orleans.

. . . KARL N. CARTER as manager of general sales (exclusive of accounts served by the Detroit office) for The Ohio Rubber Co., Willoughby, O.

. . . JAMES N. KROHNE as assistant to the president and director of product development for the C. K. Turk Corp., South Bend, Ind.

. . . JOHN W. TUCKER as sales representative for Hall-Scott engines (ACF-Brill Motors Co.) in southern California and Arizona.

. . . the following new assistant motor truck branch managers for International Harvester Co.: W. F. SCHAEFFER, Shreveport; M. R. MCCLURE, Fort Dodge, Iowa; H. T. ROSELL, DALLAS; R. G. WALLS, New Orleans, and G. B. HEALEY, Davenport. J. D. RICHARDSON heads the new Omaha motor truck branch.

. . . these personnel changes in the Service Division of Thompson Products, Inc.: C. A. COLE as market research manager; N. R. SWARNER as northwestern sales manager; T. A. ROWE as southwestern sales manager; M. R. HOPKINS as southeastern sales manager; MORRIS WRIGHT as northeastern sales manager; G. C. COLLINS as fleet sales manager, and R. G. BEEBE as sales order department manager.

. . . DR. MELVILLE F. PETERS, as chief engineer of Titeflex, Inc., Newark, N. J. In addition to his new duties he will continue to direct basic research on Titeflex products.

. . . E. M. Westberg as manager of Commercial Body Division, eastern region, The White Motor Co.

. . . DONN SUTTON as public relations counselor for Borg-Warner Corp., Chicago.

. . . HAROLD F. HAMMOND as assistant manager of the Transportation and Communication Department of the U. S. Chamber of Commerce. COLONEL ALVIN B. BARBER is department manager.



. . . HARLAN G. PINGREY as advertising manager for the South Wind Div., Stewart-Warner Corp. For the past several years he has been associated with Chicago advertising firms.

(TURN TO PAGE 250, PLEASE)



VACDRAULIC—the K H Superior Brake Power Booster!

One of the latest names to be added to the growing list of **Kelsey-Hayes** precision-made products is **VACDRAULIC,** the superior brake power booster that reflects Kelsey-Hayes "know-how" in its engineering, construction, and performance.

Here are some of VACDRAULIC'S superior features:

(1) ***A Sealed Unit*** — Vacdraulic is the only booster with all valves and other moving parts sealed in one rugged housing . . . safe from dirt, grease, and rough usage.

(2) ***Easier to Mount*** — Vacdraulic is a compact unit that connects only to the hydraulic line and intake manifold.

(3) ***Easier to Maintain*** — Once properly installed, Vacdraulic requires no lubrication or valve adjustments.

(4) ***Easier to Operate*** — Vacdraulic permits smooth, powerful braking action with the lightest *feather-touch* control.



Manufacturers and Automotive Distributors: Contact Kelsey-Hayes For Additional Information.

KELSEY-HAYES WHEEL CO. DETROIT 32, MICHIGAN

CCJ Newscast

(CONTINUED FROM PAGE 248)

WASH. UPS LOAD LIMITS

A bill has been passed in the Washington legislature increasing permissible load limits up to 72,000 lb. on combinations of vehicles. When the law becomes effective in December, 1947, the state is to adopt recommendations of the American Assn. of State Highway Officials which call for a formula to determine the maximum load in pounds to be carried on any group of axles. The load limit at this time is 68,000 lb.

The commercial freight vehicle speed limit is increased from 35 to 40 miles per hour by the approved legislation, effective June 11. Under the new bill, carriers will be permitted an excess of two inches beyond either side of the truck body on tires where such overwidth if due directly to expansion, or for safety appliances, clearance lights, door handles or signal brackets. Present restrictions limit the width of motor vehicles to eight feet.

Proposed legislation aimed at increasing taxes on gasoline and diesel fuels was defeated at the 1947 section of the state legislature. The bill would have raised the levy one cent per gallon on gasoline and two cents per gallon on diesel fuel. The state's motor transport organizations vigorously opposed the measure.

Converter gear used in converting semis to full trailers will be licensed for the first time in Washington.

MACK REPORT FOR 1946

Mack Trucks, Inc., has reported a loss of $882,194 for 1946 after providing for an estimated refund of Federal income and excess profits taxes under carry-back provisions of the Internal Revenue Code amounting to $7,500,000. Net sales for the year amounted to $36,714,696 as compared with $122,207,974 for 1945, a decrease of $85,493,278 due principally to the strike which occurred during the year and which suspended all production for a period of six months.

Dividends aggregating $2.00 per share were paid during 1946 as compared with $3.00 per share paid during 1945. The consolidated balance sheet as of December 31, 1946, shows current assets of $50,341,996, and current liabilities of $18,065,763, compared with $45,646,397 and $11,488,829 respectively at the end of 1945.

The report reveals that at the end of 1946 there remained on the books unfilled orders of all kinds amounting to $117,000,000, as against $54,000,000 for 1945.

MILLER RE-NAMED TO ICC

The nomination of Carroll Miller for a third seven-year term as a member of the Interstate Commerce Commission has been approved by the Senate. A native of Richmond, Va., Commissioner Miller was appointed to ICC from Pennsylvania and was engaged in practice as a consulting engineer in Pittsburgh prior to his government service. In the ICC, Commissioner Miller has been a staunch advocate of railroad consolidation.

721 HIJACKERS CONVICTED

With the apprehension of 13 men charged with hijacking motor truck shipments in the New York Metropolitan area recently, J. Edgar Hoover, director of the FBI, revealed that convictions involving thefts from interstate shipments in the first eight months of the fiscal year totaled 721. Sentences totaling 1416 years and fines amounting to $41,971 were imposed. Savings and recoveries amounted to $292,945.

GROVER EALY DIES

Grover C. Ealy, president and general manager of Inland Motor Freight, Spokane, Wash., and president of Pacific Highway Transportation, Inc., Seattle, died at his home after a long illness. Mr. Ealy started operations in 1918 with a small line between Spokane and Deer Park, Wash., and gradually extended his operations to cover eastern Washington, northern Idaho and northwest Oregon. In 1942 he purchased Pacific Highway Transport, which serves western Washington and Portland, Ore. He was a past president of the Washington Motor Transport Assn.

(TURN TO PAGE 252, PLEASE)



I LIKE the Hygrade Line because they have tools and testers that make my work easier—and more profitable. Take Jiffy Jig, for instance. You lock it in a vise and clamp any small unit to it—fuel pump, carburetor, distributor, etc.

No chewed up castings from jaws of vise; no breakage from falls. Turns in any position at most convenient working angle. Leaves both hands free. A great tool—my best helper. Inexpensive. Get one, you'll like it.

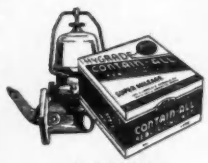
From your jobber

HYGRADE PRODUCTS CO., INC.
35-35 Thirty-fifth Street, Long Island City 1, N. Y.

HYGRADE
REPLACEMENT PARTS

Hygrade Line AUTOMOTIVE PRODUCTS

• • ENGINEERED FOR OLD UNITS • •



FUEL PUMPS
KITS AND PARTS

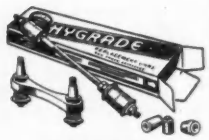


CARBURETOR
KITS AND PARTS


FILTERS—COMPLETE LINE



SPEEDOMETER
CABLES—CASINGS—PARTS



SHOCK LINKS
BUSHINGS AND PARTS

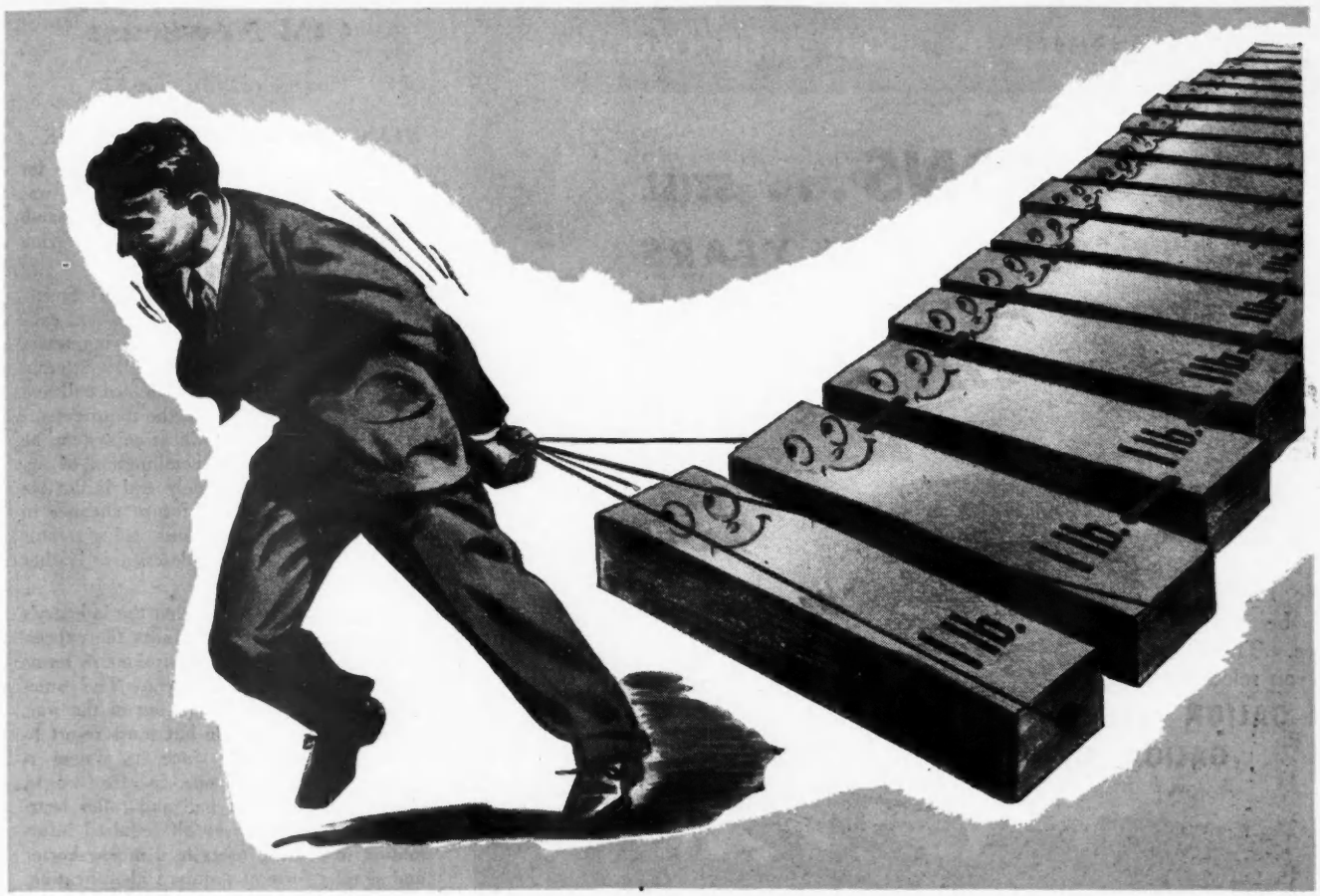

FUEL LINES AND FITTINGS

•

TOOLS AND TESTERS TO COVER ALL HYGRADE PRODUCTS

•

ASSORTMENTS FOR EVERY NEED



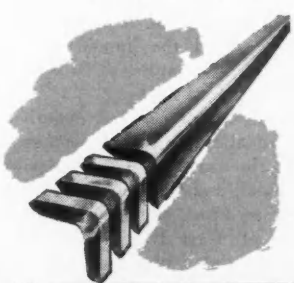
Your Business is Dragging POUNDS Around

Pounds of payload, pounds of dead weight. Pounds that bring in income, and other pounds that slow up schedules, wear out tires, burn gas and oil. Pounds that mount to *tons* as the days go by . . .

The equipment builder who sees it your way uses American Magnesium to save pounds. 35% lighter than aluminum, 75% lighter than steel, it can cut pounds from the dead weight you haul, reduce unsprung weight, ease transportation burdens *without sacrificing strength or safety.*

Ask your builder to point out the ways that he's saving precious pounds by using American Magnesium in the equipment you buy. Give him the "go ahead" to give *you* a bonus in lightness with this modern metal. ALUMINUM COMPANY OF AMERICA, sales agent for American Magnesium products, 1719 Gulf Bldg., Pittsburgh 19, Pa.

EQUIPMENT BUILDERS... HERE'S AN IDEA...



Many a small part is being produced economically today by cutting sections from an American Magnesium extruded shape. It's quick and economical. Can the 59 years' light-metal experience of Aluminum Company of America help you to other short cuts? With facilities for producing all forms of magnesium, we'll give you unbiased advice.

MAGNESIUM MAZLO Reg. U.S. Pat. Off. PRODUCTS

AMERICAN MAGNESIUM CORPORATION

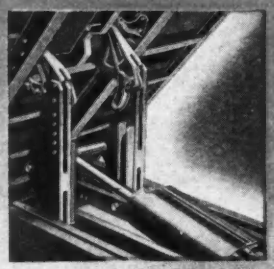
SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA

WHAT OWNERS TELL US ABOUT THEIR GALIONS

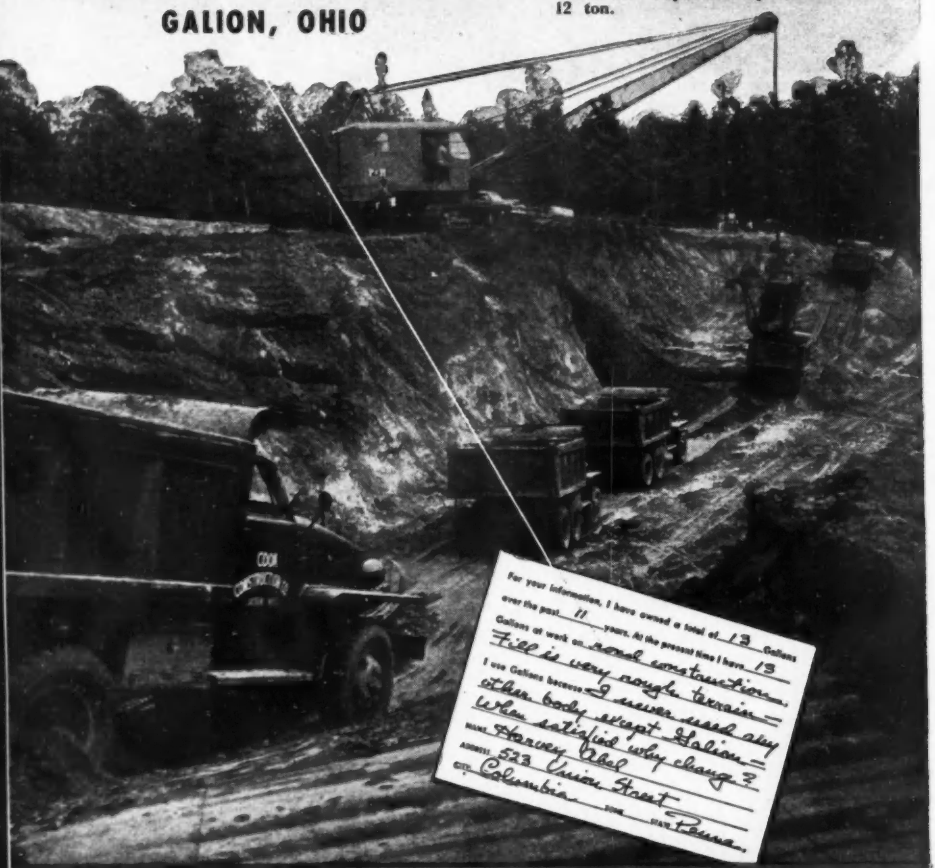
13 GALIONS... STILL WORKING AFTER 11 YEARS ON ROAD CONSTRUCTION

Road work in rough terrain isn't sissy stuff . . . so its no wonder this Galion owner is more than satisfied with his fleet of Galions. Make your next dump truck Galions and you too, will know why their patented double lift arm hoists and rugged bodies can't be beat for years of trouble-free service. There is a local Galion Dealer to help you select the best unit for your work.

THE GALION ALLSTEEL BODY CO.
GALION, OHIO



Galion heavy duty Model GH-57-58. Capacities up to 12 ton.



GALION Allsteel

HYDRAULIC HOISTS and BODIES MAKE BETTER DUMP TRUCKS

CCJ Newscast

(CONTINUED FROM PAGE 250)

STANDARDIZED BEARING CODE

A standardized numbering system for ball and roller bearing dimensions was presented recently to the American Standards Assn. by the Anti-Friction Bearing Mfrs. Assn.

The new code, presented by H. O. Smith, executive secretary of the association, calls for a common means of identifying types, sizes, tolerances, modification of internal design and lubrication of standard ball and roller bearings to meet all the requirements of users. This new identification system, he pointed out, utilizes a combination of figures and letters alternately and is flexible enough to take care of future changes in design, tolerances, lubricants and separator materials and is semi-descriptive rather than a dead code.

Mr. Smith pointed out that the industry's new numbering system permits the expression of more variable descriptions in terms of 4 digits, whereas the Army-Navy numbering system, which grew out of the war, is not only less flexible but must resort to the use of 12 digits since its system is basically a numerical one. In other words, the manufacturers of ball and roller bearings are able to convey all required information to bearing users in a much shorter and simpler form of standard identification.

Mr. Smith revealed that the industry's new numbering system was used in its ball and roller bearing specification manual published in October, 1942, and was adopted by the Society of Automotive Engineers for inclusion in the SAE handbook first issued in 1943.

MOVES TO BAN ICC PLATES

The stencil method of identification of motor carrier vehicles has been made permanent by the Interstate Commerce Commission, and a proposed order will ban the use of plates entirely, according to a recent announcement.

The proposal will require that the use of plates be discontinued on the date when the order becomes effective. In announcing this move ICC stated that many of the plates issued previously had come into the possession of persons not authorized to display them.

IHC APPOINTMENTS

International Harvester Co. motor truck division, has announced the appointment of Mr. B. M. Kaiser as Southwest District manager of motor trucks.

Mr. Kaiser's twenty-two years of experience has included all phases of the motor truck business. He has been retail salesman, retail manager, assistant branch manager at Cincinnati and Baltimore, and branch manager at West Haven, and in April, 1945, was appointed branch manager at Baltimore.

J. T. Sullivan formerly district manager, Southwest District, has been transferred to the Eastern District in the same capacity.

(TURN TO PAGE 254, PLEASE)



SINCE THEY'RE BEST WHEN THE TRUCK IS NEW . . . . THEY'RE BEST FOR REPLACEMENT TOO!



BUILT TO LAST LONGER IN TRUCKS AND TRAILERS. Timken tapered roller bearings last longer under the heaviest radial or thrust loads, or any combination of the two. Leadership in design, our own special steel and incredible accuracy in manufacture combine to assure the dependable performance of Timken bearings. That's why it pays to look for the trademark "Timken" on every tapered roller bearing you buy. The Timken Roller Bearing Company, Canton 6, Ohio.

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION

CCJ Newscast

(CONTINUED FROM PAGE 252)

NEW COLUMBUS TERMINAL

Construction will be begun at once on a new $500,000 terminal for the Commercial Motor Freight, Inc., at Columbus, Ohio. Four units are projected—a general office building, branch office building, freight dock and garage. The freight dock will accommodate 58 vehicles, and the 93 by 242 ft. garage will feature radiant heating. All buildings will be of reinforced concrete, steel and brick.

Part-Time Workers Affecting Safety Come Under ICC, Supreme Court Rules

The Supreme Court in a 6-3 decision handed down on March 31 defined the Interstate Commerce Commission's power to establish qualifications and maximum hours of service for those employees whose services affect the safety of transportation of common carriers, contract carriers or private carriers. In the case in question (Levinson vs. Spector Motor Service) the court ruled that the work of loaders even though employed in this capacity only part time, affects safety of motor carrier operations. The effect of the ruling was that such employees are excluded from a right to increased pay for overtime service under the Fair Labor Standards Act.

The court's opinion delivered by Justice Burton stated:

"We have in this case an employee working full time throughout his employment as a 'checker' or 'terminal foreman.' If he had worked full time as a 'loader' as defined by the Commission he would have been unquestionably within the jurisdiction of the Commission to the extent necessary to exclude him from paragraph 7 of the Fair Labor Standards Act. Under the conclusions of law of the Commission in ex parte No. MC-2, 28 M.C.C., 125,139, a full-duty 'loader' does not have to devote more than a 'substantial part' of his time to activities directly affecting safety of operation in order to be subject to the power of the Commission to establish qualifications and maximum hours of service with respect to him. So here it is enough for the purposes of this case that a substantial part of the petitioner's activities consisted of the doing or immediate direction of the very kind of activities of a loader that are described by the Commission as directly affecting safety of operation. The petitioner's activities thus affected safety of operation, although it does not appear what fraction of his time was spent in activities affecting safety of operation. As a consequence, he comes within the power of the Commission to establish qualifications and maximum hours of service with respect to him and, by the express terms of paragraph 13 (b) (1) of the Fair Labor Standards Act, he is excluded, automatically, from the benefits of paragraph 7 of that Act."

The dissenting opinion delivered by Justice Rutledge was based on the fact that the ICC's definition of "substantial" was too broad in regard to the amount of time spent in safety activities. The dissent also took issue with the court's finding regarding ICC jurisdiction over employees whose duties are only partially concerned with safety.

Justice Rutledge also agreed that "substantial effect" upon safety rather than "substantial time" spent in doing work affected, should determine the scope of ICC's safety power.

In a similar case (Pyramid Motor Freight Corp. vs. Ispass, Granofsky, Brownstein, et al) the Supreme Court ordered the case remanded to District Court with directions to proceed in accord with the opinion in the Levinson case. In effect the District Court is to determine whether or not the activities of the respondents, who, according to the petitioner, worked as drivers, helpers and loaders, consisted wholly of the class of work which is defined by the ICC as that of a "loader" of freight for interstate common carrier by motor vehicle as affecting the safety of operation of motor vehicles. This decision was also by a 6-3 majority with Justice Rutlege again delivering the dissent.

(TURN TO PAGE 376, PLEASE)

DECALS

will do your LETTERING

Quick

Fleets of 25 or more save time, money and labor with

SpeeDecals!

Any good shop mechanic or paint man can apply them. Equipment is ready in hours instead of days or weeks.

PERMANENT - BRILLIANT

MAKES REPAINT JOBS A CINCH!

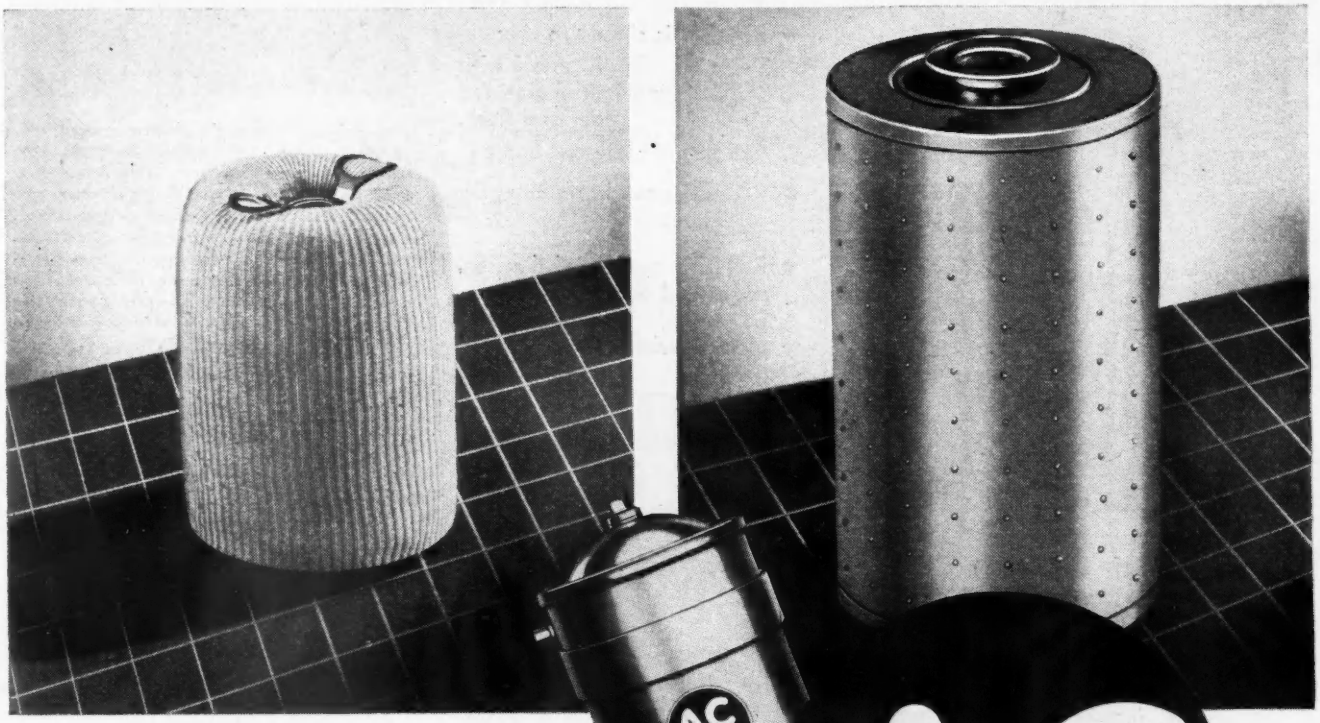
Fast Delivery!

DECALCOMANIA SPECIALTIES CO.

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PHILADELPHIA 23, PA.







Solve your filtration problems by changing to AC's specially processed, long fibre cotton Replacement Elements. Fit all popular makes of oil filters. If you have no oil filters, equip with AC's for maximum protection against fuel waste, power loss, and engine wear.

AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION

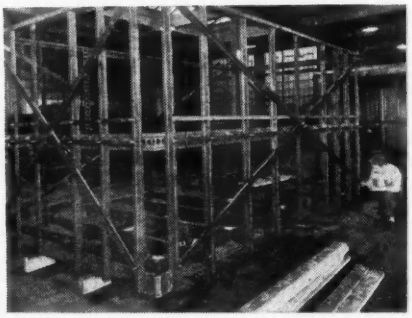
AC OIL FILTERS

White-Parish Bodies

(CONTINUED FROM PAGE 118)

sembly holes the design principle that was developed to such a high degree of production efficiency by the aircraft industry. By the application of this principle, all of the frame sections and formed panels are fabricated on precision tools, and all matching and related parts have assembly holes pre-punched and coordinated. This assures accurate precision fits by clip assembly methods, prior to welding, permitting the full application of mass production methods on standardized bodies. At the same time it offers a great many benefits of a limited application of production methods to custom bodies, narrowing the gap between the two types of bodies and making possible closer coordination between the two types of operation in one plant.

Under today's conditions, with body shops running at full capacity and production space held at a premium, the use of these Type-B sections and the assembly methods permits even further increases in production through more efficient use of floor space. No space consuming, non-flexible, assembly jigs are required to attain production speed in the assembly of the basic structure. Full assembly of a wide range of body types can be accomplished by clip fastener methods on an assembly dolly. This dolly is an integral part of the moving production line, and utilizes no more productive floor space than a normal body under construction.



Basic body frame is shown completely pin-assembled and being squared with diagonal squaring bars. Precision fits, and rapid and positive alignment, are made possible by the prepunched, coordinated holes in the structural members, which also permit construction changes of 2-in. increments. This design also is said to eliminate the possibility of built-in stresses due to forced fits

Weight-saving factors have been fully considered in the development of these body sections. Hy-tensile steel is used throughout, and sections are tapered or adjusted in weight or gage to keep the upper portion of the body light, assuring a low center of gravity, and the important stress points heavy enough to insure sufficient strength for long life and efficient service.

The basic frame of a White-Parish body represents an extremely sound and well designed structure with all the key members, posts, base rails, in and outside belt rails and lintels so designed that each is a continuous, uninterrupted, structural member, assuring an even distribution of the load throughout the entire body structure.

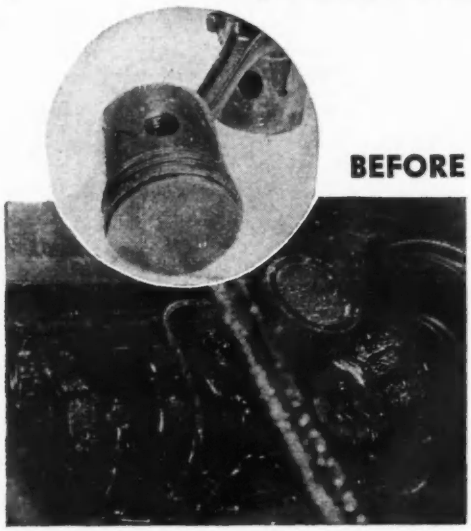
All parts are formed on precision tools with the pre-punched, coordinated holes assuring precision fits of

(TURN TO PAGE 258, PLEASE)

AVOID ENGINE TEAR DOWNS

to remove Carbon and Sludge

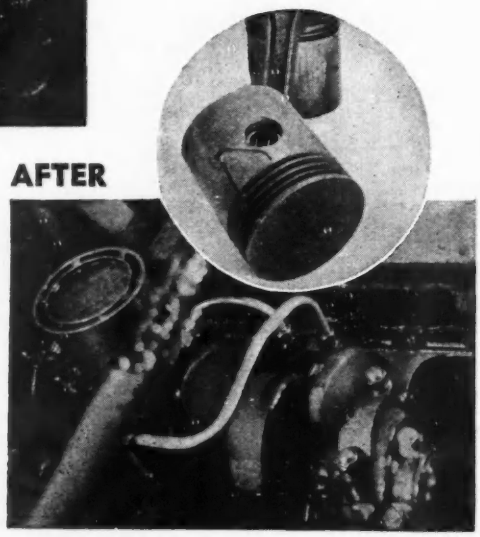
USE **RUNZIT**



BEFORE

- RUNZIT is simple to use: Drain oil. Fill oil system with RUNZIT and idle engine for 30 minutes. Drain and flush. Replace the oil.
- RUNZIT can't harm any part of the engine.
- RUNZIT reaches all the passages and pockets which can be missed even in a complete overhaul.

AFTER



- By-products of combustion form deposits that restrict oil flow; cause excessive wear and high oil consumption.
- RUNZIT thoroughly cleans the engine, insures oil flow to vital areas and prevents sticking parts.
- We guarantee results in your engines like those shown in these unretouched pictures.

LET US PROVE IT TO YOU

SOLRUN SERVICES, Inc.

49 North Second St., Philadelphia 6, Pa.

Makers of
Cleaning systems and materials. Degreasers. Decarbonizers.
Rust Prevention Materials.

Compare This New *Nylon Speed Wash



THE FOUNTAIN BRUSH THAT CUTS TRUCK WASHING TIME IN HALF

*Nylon mixture ***SPEED WASH*** soaks, scrubs, and rinses in one easy, fast operation. Clean fresh water is constantly fed to the surface from a standard size hose through the 5 ft. handle and eight jets in the 11" back of the brush. Back and handle are of steel. Tufts cannot come out — they are stitched into the block by hand with rust-proof wire. This brush has been proved on many thousands of trucks, trailers and trains. It is guaranteed to fit your needs. Order today. Include check for postpaid shipment. **$11.75**

Exhaustive Tests Have Proved...

NYLON Speed Wash lasts up to four times longer

NYLON Speed Wash saves truck finishes

NYLON Speed Wash is unharmed by cleaning chemicals

NYLON Speed Wash eliminates matting and tangling of tufts

Yet Nylon Speed Wash is offered at no increase in price

MILWAUKEE DUSTLESS BRUSH COMPANY

526 North 22nd Street (M D) Milwaukee 3, Wisconsin

MILWAUKEE DUSTLESS BRUSH CO.
526 N. 22nd St., Milwaukee 3, Wis.

Please ship.....Nylon Speed Wash brush(es). It is understood that we can return this equipment within 30 days for a full refund of our money if the Speed Wash doesn't prove entirely satisfactory.

Firm Name .....

Address .....

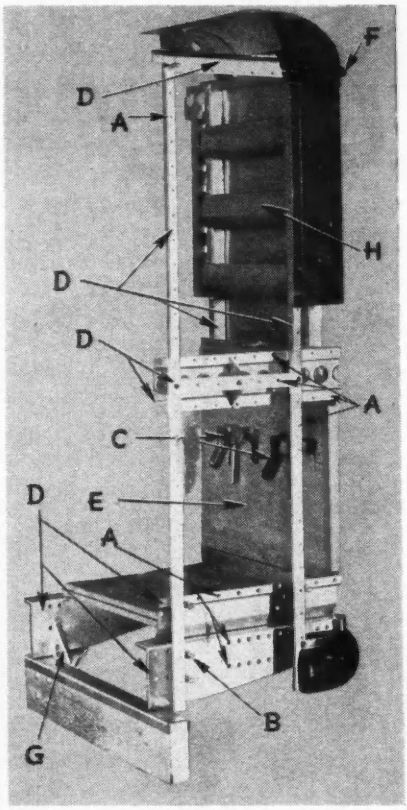
Please send us information on ☐ "Dustless" floor brushes ☐ "Speed Sweep" floor brushes ☐ Other floor maintenance aids.

White-Parish Bodies

(CONTINUED FROM PAGE 256)

matching parts, accurate and rapid clip assembly of variable sizes and types of bodies, prior to welding. This eliminates the necessity of bending or twisting the component parts into place, and precludes built-in or internal stresses and strains after welding, thereby resulting in longer, trouble-free service for the operator.

With the new Type B Sections, body builders now have a complete line of body sections from one source, with the exception of the flat stock. These sections include the understructure, body framing, formed vertical corners, formed roof caps, ball corners, door openings, door frames, etc. These sections and production methods can be utilized on a wide range of body types and sizes. The size may vary in increments of 2 in. in length, width, or height. With this flexibility of body types and sizes, there is an absolute minimum of layout required, with its resultant errors, as practically all layout is accomplished by the use of the pre-punched holes.



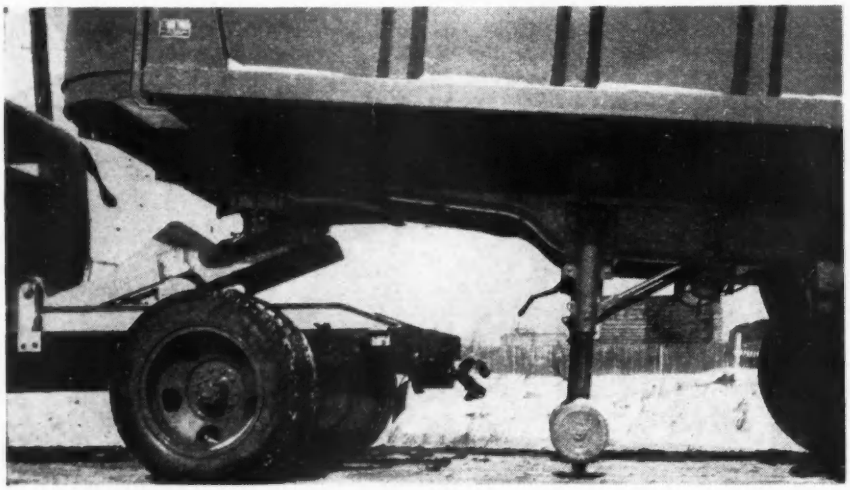
Construction model showing pre-punched holes, A; assembly clips, B; assembly guns, C; continuous full length basic structural members, D: plywood lining, E (held off the floor by base rail); upper rub rail, F (at the roof line); oval inside lines and tie-down slots, G; and special tie-down gussets, H

Accessible for Maintenance

FROM the operator's maintenance viewpoint, all functional parts are easily accessible for repair and replacement, with a minimum tearing down of adjoining parts. Accessibility is also provided for the builder by the elimination of all blind riveting operations.

Here are a few other construction features: There are no applied moldings, which not only saves labor and material, but also improves the appearance of the body. The roof molding is formed integral with the roof caps and ball corners, functioning as an upper rub rail and eliminating the constant need of drip mold-

(TURN TO PAGE 260, PLEASE)



Now! **Any Parked Trailer Spotted by Driver Alone Without Leaving Cab . . . !**

WITH a Pollard Fifth Wheel Hydraulic Platform on your tractor truck, one man can move a parked semi-trailer from one location to another without leaving the cab to crank the dolly or release the 5th wheel lock. These operations are controlled entirely inside the cab.

Here's Why It's Sensational

- Eliminates entirely cranking of dolly.
- No more dropping of trailers on front plates, as dolly wheels always remain extended.
- Enables one man to move twice as many trailers as 2 men with conventional 5th wheel mounting.
- When elevated, dolly wheels clear ground approximately 8 inches — enough to clear any yard entrance.



Operator has full vision of rear wheels when shunting

- Slides easily under any trailer front because it has lower than standard mount.
- Hoist tested to 15-ton capacity—ample for any trailer load.
- Adapted to standard 5th wheel equipment.

Write for Literature

C. E. POLLARD CO.

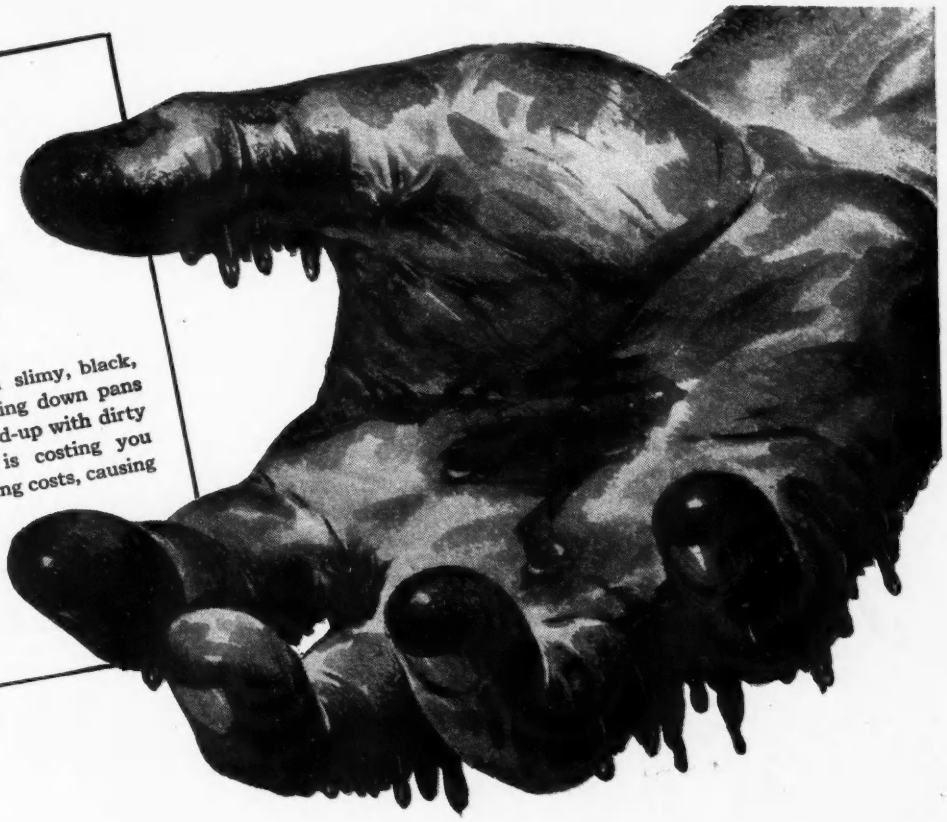
14571 Schaefer Road Detroit 27, Mich.

Pollard

5TH WHEEL HYDRAULIC PLATFORM

Do Your Mechanics' Hands Look Like This?

Do their hands drip with slimy, black, abrasive sludge from pulling down pans on engines that are gummed-up with dirty oil? Brother, that stuff is costing you money . . . raising operating costs, causing higher repair bills, cutting the life of your engines. So equip your fleet with Fram and cut costs!



Sludge Costs Money!



The price of sludge is high! When it gets in your engines, it can cost you hundreds of dollars—in breakdowns, replacements, repairs and overhauls. That's why it's just plain horse sense to equip your fleet with Fram filters and cartridges to *clean the oil that cleans the motor.** You'll cut operating costs and save money when you do!

GUARANTEED TO SAVE YOU MONEY!
Here's Fram's guarantee: install Fram filters on your fleet. If, within 90 days, you don't agree that Fram filters save you many times their cost in repairs, overhauls and maintenance, your purchase price will be cheerfully refunded! If your fleet is already filter-equipped, you can install genuine Fram replacement cartridges to remove dirt, dust, grit, sludge and abrasives from oil, thereby check trouble before it starts. That's bound to mean longer engine life for you. Call your Fram Distributor today! Fram Corporation, Providence 16, R. I. *In Canada:* J. C. Adams Co., Ltd., Toronto, Ontario.

**Certain heavy-duty oils, due to the detergent additive used, turn dark in color almost as soon as put into the engine. Where such oils are used, cartridges should be changed on a mileage basis.*

FRAM OIL & MOTOR CLEANER

Cleans the Oil that Cleans the Motor

White-Parish Bodies

(CONTINUED FROM PAGE 258)

ing replacement. A combination steel base rail and floor sill is provided to absorb load impact normally taken by the plywood lining at this point. This base rail also keeps the bottom of the plywood off the floor and away from floor moisture. The bottoms of all side posts are flared to reinforce them at the point of most critical stresses. Patented sill mounting gussets are used to provide additional strength at critical stress points of the cross sills.

The White Motor Co., as exclusive distributor of the Parish B-Line sections, is now in a position to assist body builders in setting up to build B-Line bodies and to make deliveries of sections from strategically located inventories.

The Body Builder's Manual, which is available to all body builders, has been written around the experimental body shop. This shop was set up and staffed with body and methods engineers for developing and applying the best production methods and techniques, and to assure the most efficient, yet flexible, use of these sections.

The White Motor Co. is not in the body building business. It is operating an experimental body shop only for the purpose of developing production methods and techniques that will enable body builders everywhere to have the benefit of this research and study. This shop, under the direction of E. M. Westberg, commercial truck body designer and consultant, is located in the Philadelphia branch.

Body builders are invited to make arrangements to visit this very unique operation, and to discuss the application of White-Parish Type B sections to their body building operations. Inquiries from Virginia north and Pittsburgh east should be directed to The White Motor Co., 20th and Erie Ave., Philadelphia, Pa., attention of Mr. Westberg. All other territories should send their inquiries to The White Motor Co., 842 E. 79th St., Cleveland 1, Ohio, attention E. Teel. Mr. Teel has been in the commercial body business for many years.

END

(Please resume your reading on P. 116)

See for yourself-the advantages of GRAY-MILLS **AGITOR**
PARTS CLEANING SYSTEMS



Gray-Mills Jobbers are now ready to give you an actual demonstration –in their stores–of this complete AGITOR PARTS CLEANING SYSTEMS



See how you can use the entire tank for agitated soak cleaning of large parts like crankcase pans, (no heating required).

See how you can clean small parts at the same time, with flowing solvent. Here is the utility you want!

... And see how the new Agitor Jr. simplifies and speeds cleaning of carburetors and other parts requiring Speed-Agitene Solvent for carbon and varnish.

See your Jobber...or send for descriptive catalog

GRAY-MILLS CORPORATION
AGITORS • AGITENE SOLVENTS • PUMP UNITS
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INVENTORS MAKE APPEAL

Deploring the fact that many persons including scientists have discounted the possibility of successful defense measures against the atomic bomb, the National Inventors Council, of which Charles F. Kettering is chairman, has issued an appeal for ideas on defense measures against all kinds of modern warfare.

JOBSERVATIONS

We're tempted to say, he needs a swift kick in the seat of his can'ts.

* * *

TWO-THIRDS OF PROMOTION IS "MOTION."

* * *

In order to have coins jingle in your pocket you've got to shake a leg.

* * *

The higher a man rises in the world the more he has to depend on those beneath to hold him up.

* * *

REMEMBER "DOUGH" BEGINS WITH DO.

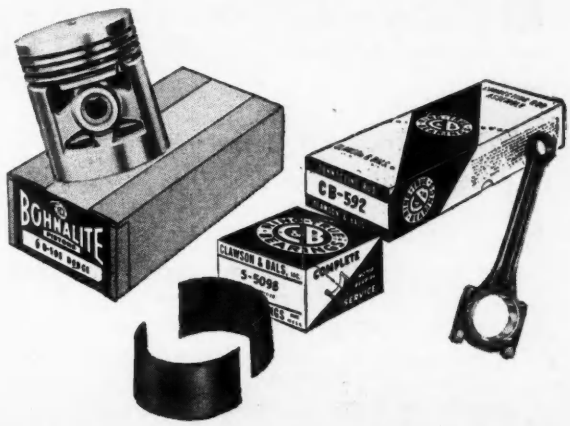


TESTING RAILROAD CAR WHEELS
For many years wheels on railroad cars have been tested by being struck with a hammer. Only when wheels "ring true" can they pass inspection.

"RING-TRUE"

IN AUTOMOTIVE PRODUCTS, TOO, "RING-TRUE" MEANS THE FINEST

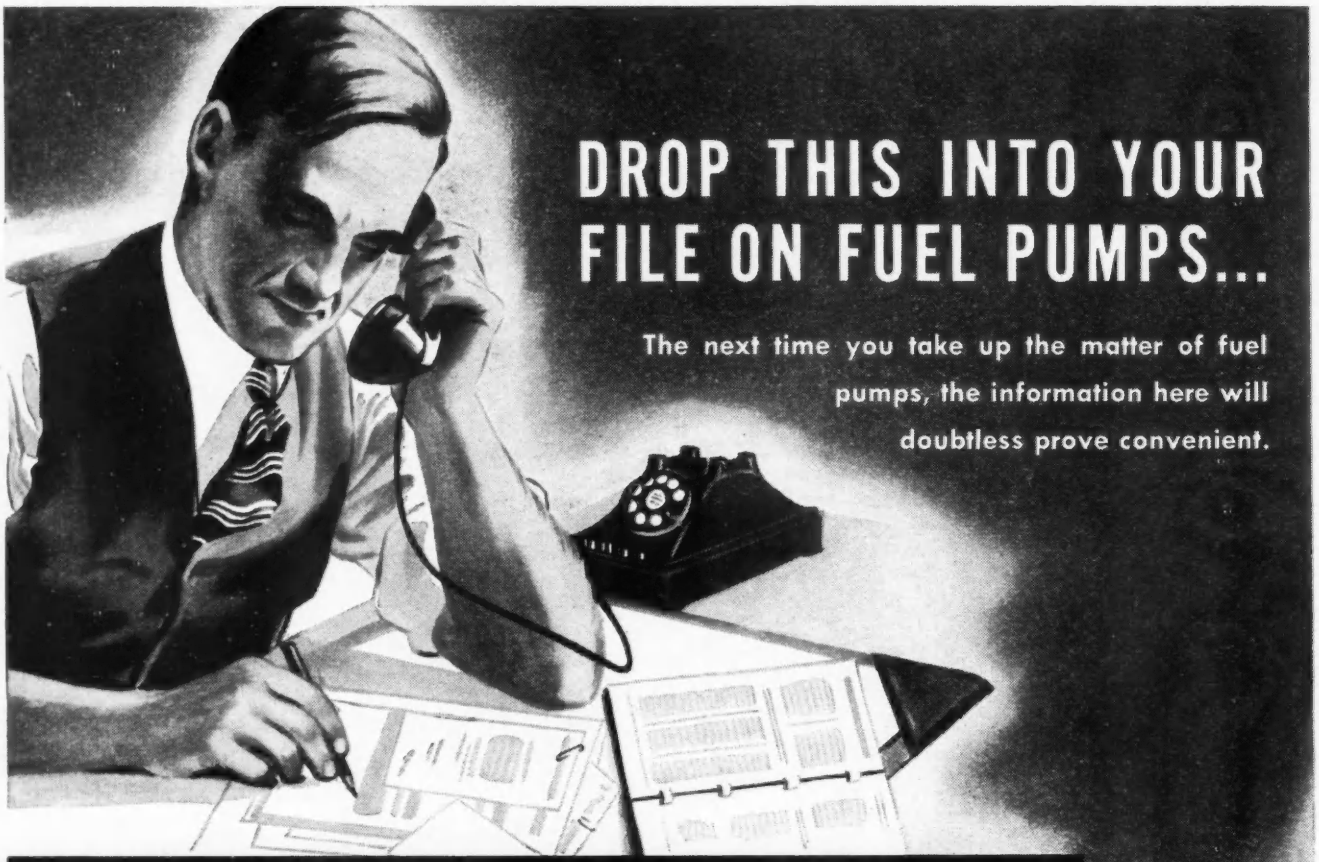
Check your needs for automotive parts now against this complete listing of the "Ring-True" line of Clawson & Bals: Engine Bearings . . . Reconditioned and Rebabbitted Connecting Rods . . . *Bohnalite* Pistons and Pins . . . Hydraulic Brake Parts . . . Hydraulic Brake Hose . . . Whip Ends . . . Water Pumps . . . Water Pump Repair Kits . . . Spring Shackles . . . and Flexible Hose Assemblies for gas, oil, grease and vacuum lines. If it's "Ring-True," it's the *finest!* Clawson & Bals, Inc., 2508 S. Michigan Ave., Chicago 16.



Genuine RING-TRUE PRODUCTS

CLAWSON & BALS, INC.

Really Complete Engine Bearing and Connecting Rod Service . . . Branches in Principal Cities



DROP THIS INTO YOUR FILE ON FUEL PUMPS...

The next time you take up the matter of fuel pumps, the information here will doubtless prove convenient.

Features of Autopulse Electric Fuel Pumps...

1 You need only a small inventory of Autopulse Pumps because they can be used on every vehicle, car or truck in your fleet.

2 Save fuel because they deliver fuel only as needed and at a constant pressure—will never flood or starve the carburetor.

3 Can be used with any type of fuel—high octane, aromatic, or any grade below that.

4 Not affected by temperature, barometric pressure or humidity.

5 Eliminate the necessity for unnecessarily rich mixtures with resulting carbon deposits.

6 Provide ample power for heavy grades or in the mud.

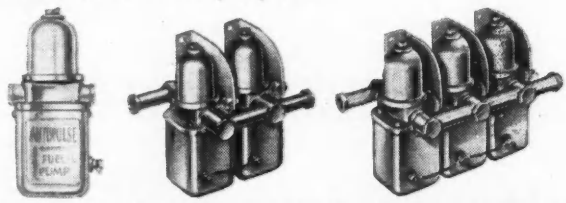
7 May be used alone as an auxiliary or as a standby unit.

8 When used as an auxiliary, Autopulse draws no current except when extra demand requires it to go into action.

9 Eliminate ragged acceleration after idling.

10 Prevent stalling in traffic.

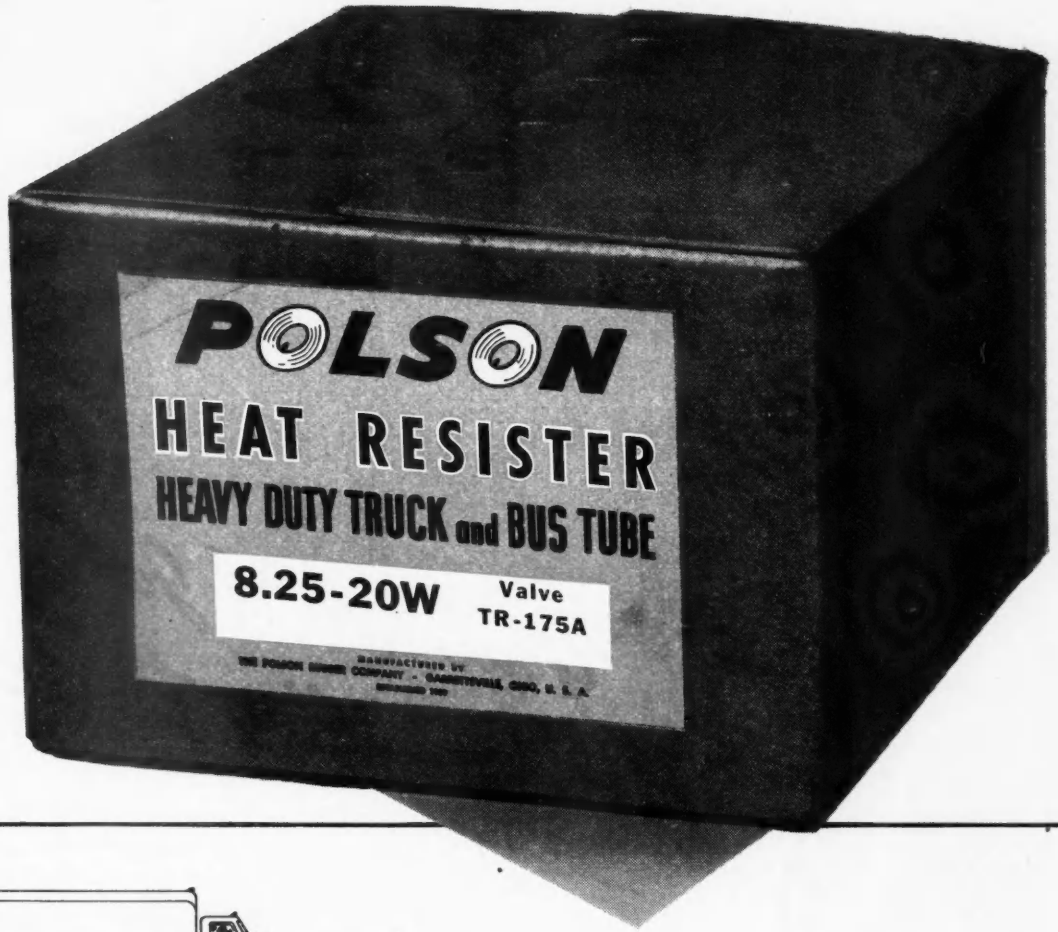
11 Easily and quickly installed—special brackets for that purpose.

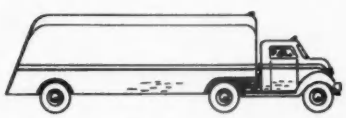


WRITE US DIRECT FOR QUOTATION

AUTOPULSE *Corporation*

2821 Brooklyn Ave., Detroit 1, Michigan

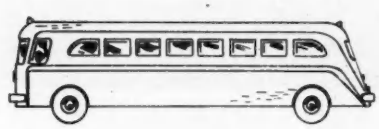




LONG MILEAGE AT LOW COST PER MILE

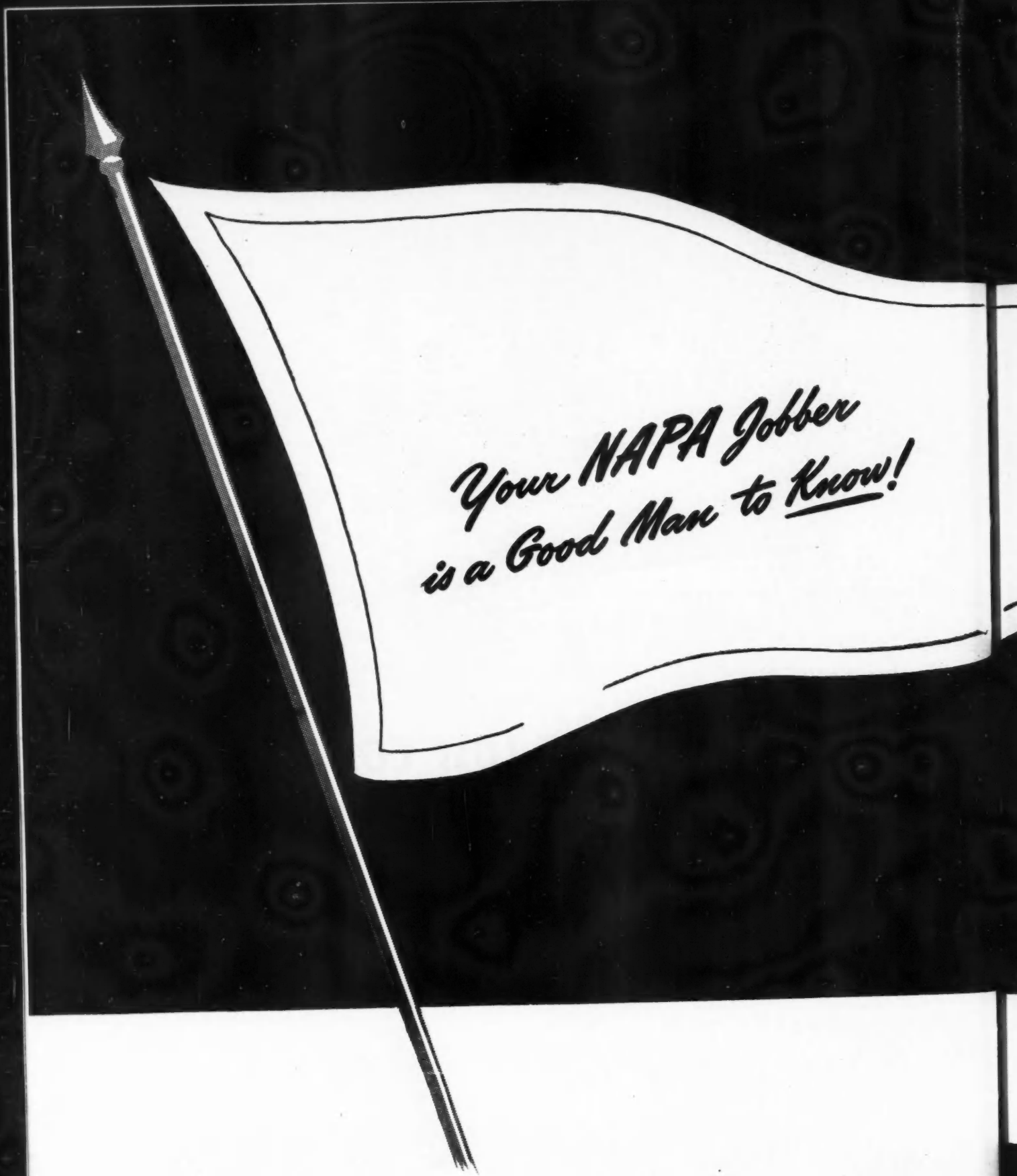
Polson builds truck and bus tubes to the highest standards to obtain maximum operating efficiency. This gives you the lowest costs per mile—your best yardstick of true value.

Polson tubes available in all sizes from 4.40—21 to and including 11.00—20.



THE POLSON RUBBER CO., GARRETTSVILLE, OHIO • ESTABLISHED IN 1909

POLSON



NATIONAL AUTOMOTIVE PARTS ASSOCIATION • DETROIT 1, MICHIGAN

Above All

—your NAPA Jobber is a parts specialist . . . a man who has made it his business to know how to meet your needs intelligently and promptly on parts for cars and trucks of all makes . . . a man who knows that parts of genuine quality are the greatest safeguard for the success of both your business and his. . . . That's why he is an NAPA Jobber, with all the resources and experience of a national organization to help serve you better. . . . And that's why he's a good man for you to know!

NAPA *is the largest Independent Parts Organization in the Industry!*

N·A·P·A
National Automotive Parts Association
Assurance of Quality

American Brakeblok · Allied · Wisconsin · Spicer · Monmouth · TRICO · Allied · Grapho · Brown Lipe · Balkamp · Buffalo · MicroTest · Allied · A.P.C. · Standard · Detroit · Dittmer · Allied · Raymond · Raritan · Echlin · Buffalo · Allied · Celoron · Precision · Duckworth · Puritan · Martin-Senour · Belden · New Britain · Federal · United

Smoothest Ride in Truck History!

The Bostrom Level-Ride seat is the last word in truck seat comfort. Hydraulic shock absorber . . . passenger car suspension under the cushions . . . rubber bearings . . . oil tempered springs . . . tubular steel frame . . . adjustment for various weight drivers, rough and smooth roads . . . five inch fore and aft movement for short and tall drivers—these features make for the smoothest ride in truck history. Proved by truck manufacturers, large fleets, and drivers. Guaranteed to meet your requirements. Order today through your dealer or direct.









High quality cushion materials made to outlast ordinary cushions six to one.

No. 10 Bostrom Level Ride Seat ....$64.75 ea.
No. 10 Bostrom Level Ride in lots of six or more .....$59.50 ea.
No. 15 Bostrom Companion Seat (without hydraulic suspension) ....$28.50 ea.

BOSTROM MANUFACTURING CO.
Milwaukee 2, Wisconsin

BOSTROM

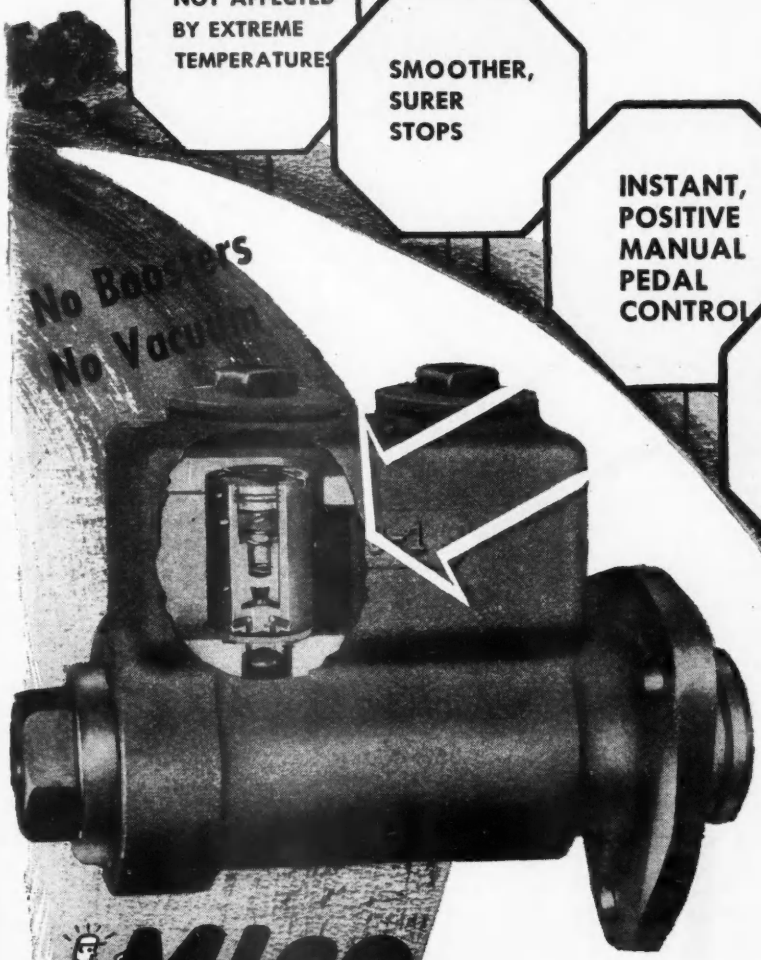
NOT AFFECTED BY EXTREME TEMPERATURES

SMOOTHER, SURER STOPS

INSTANT, POSITIVE MANUAL PEDAL CONTROL

MORE THAN DOUBLES YOUR BRAKING POWER

EXCLUSIVE! This relief valve, exclusive with MICO, allows excess brake fluid to flow freely into reservoir at any desired pressure point, and then to return to the brake cylinder when pedal pressure is released.



STOP

MICO

HY-PAR

POWER BRAKE CYLINDER

INSTALLED WITHIN ONE HOUR'S TIME

replaces the original master cylinder for greater safety.

Here is a truly compound hydraulic brake cylinder. Its braking power progresses while in mid-action from that of a conventional or low pressure cylinder to that of a high pressure unit, thereby *more than doubling* the braking power of the truck.



Smooth, instant braking with line pressure up to 2000 lbs. This tremendous pressure is produced with pedal control, absolutely independent of any power from the motor.

Installation and service are no problem as this unit requires no skilled workman, no special tools, or complicated adjustments of any kind. The simple design of the *Mico Hy-Par* cylinder means minimum maintenance too. There are only three cups ever to be replaced. These are all standard and can be purchased from most any jobber.

See your nearest MICO dealer or write for our new four-color catalog NOW!

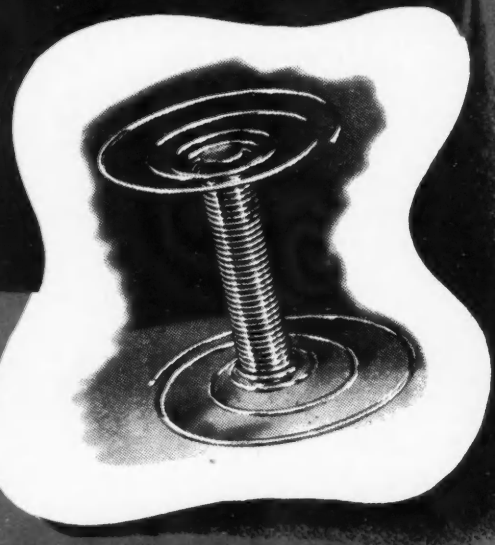
MINNESOTA AUTOMOTIVE, INC.
1332 Hennepin Avenue
Minneapolis 3, Minn.



IN THE COOLING SYSTEM FOR MONTHS BUT

Clear as Crystal!

YOUR ENGINE RUNS COOLER BECAUSE MODEL ATI BUTLER DE-SCALERS KEEP ENGINE METAL AS CLEAN AS THE WATER . . . 100% RUST-FREE, SCALE-FREE!



Install the Butler De-Scaler in the top hose (or top of radiator if there's no baffle plate)—and its *atom-o-lytic* action will stop all *hot spots* • *radiator boil-overs* • *waste of gas and oil* • *excessive carbon deposit* • *water pump damage* • *thermostat inefficiency* caused by scale and rust in the water and on the metal.

The Butler De-Scaler's *atom-o-lytic* action* precipitates minerals from the water and dislodges rust and scale from the metal surfaces. Once the solids have dropped to the bottom of the system and have been removed by draining . . . the water *stays* clean, and so does the metal. Heat transfer operates as it should—the water dissipates heat easily and the engine runs cool.

DON'T WAIT UNTIL YOU CAN SEE TROUBLE!

Scale starts forming and corrosion starts eating at the metal with the first turn of the engine . . . scale rapidly covers over the metal to prevent efficient heat transfer.

Corrosion wears away the metal and creates tiny particles that can severely damage water pump, thermostat and other parts.

By the time the situation is so bad that the radiator boils over—so much damage has already been caused that you have a big repair bill staring you in the face.

So install the Butler De-Scaler *before* trouble starts. You can be sure of long-time protection without attention—no periodic chemical treatment, no dilution to worry about, safe to use with anti-freeze and stop-leak.

Keep the fleets rolling . . . eliminate lay-ups for back-flushing and boiling-out . . . avoid repairs due to scale and corrosion . . . join the hundreds of fleets from coast to coast that are making Butler De-Scalers standard equipment. Order right away.

*Interaction between silver-plated spring and special Butlermetal core when immersed in mineral-carrying water.

Copyright 1949 Edgar H. Butler

GUARANTEED

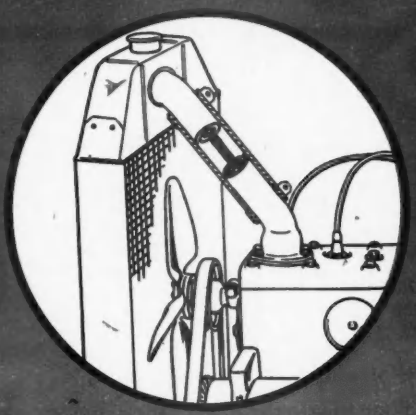
for One Year or 25,000 Miles

(One Year or 1000 operating hours in tractors)

Guarantee

The Butler De-Scaler is unconditionally guaranteed both as to workmanship and performance. It is designed to operate efficiently for a minimum of one year or 25,000 miles in automobiles, trucks and buses, 1000 operating hours in tractors. After installation, if for any reason you are not satisfied, you may within the guarantee period return the unit for full purchase price refund to Butler Engineering Co., 926 Magazine Street, New Orleans 11, La.

No responsibility is assumed in case of failure to follow directions for flushing system or in case of leakage developing from removal of old scale.



NOT JUST AN *"Inhibitor"*

IT'S A SCALE AND RUST

ELIMINATOR

Automotive Model ATI

BUTLER

COOLING SYSTEM

De-scaler

AND RUST ELIMINATOR

$4.95 EACH

M·E·M·A MOTOR & EQUIPMENT MANUFACTURERS ASSOCIATION

Manufactured by Butler Engineering Company, P.O. Box 1699, New Orleans 11, La. Manufacturers of water correction equipment for automotive and industrial requirements—hot water, steam, Diesel. Butler De-Scalers are patented; other U. S. and foreign patents pending.

$2.97 each in lots of 12 in U. S. A.

CURE YOUR COOLING SYSTEM TROUBLES Don't NURSE them!

ORDER TODAY →

BUTLER ENGINEERING COMPANY,
P.O. Box 1699, New Orleans 11, La.

Gentlemen: Please ship (fill in quantity**) . . . . . Butler De-Scalers @ $4.95 (@ $2.97 in lots of 12) to:

COMPANY.....

STREET.....

CITY..... ZONE..... STATE.....

☐ Check or money order enclosed ☐ Ship C.O.D. ☐ Bill open account

MY JOBBER IS.....

**Systems having a capacity greater than 30 quarts require one unit for each 30 quart capacity or fraction thereof. Operators of large Diesel engines should write for recommendation of proper unit to fit equipment.

BETTER SEE-ABILITY FOR DRIVERS

MEANS Better Business for You

● You can give your drivers greatly increased range of undistorted and unobstructed road view with curved windshields of Pittsburgh Safety Plate Glass. Corner posts can be so located that obstruction is practically eliminated.

Wider, clearer vision means less eye strain, less road-fag—hence fewer rest stops—for your drivers. They hustle the loads over the roads more safely, more promptly, with fewer delays and mishaps. And that means more dollars per truck hour for you.

Special Safety Glasses for windshields and windows, developed by "Pittsburgh", have made possible many improvements in truck and cab design. Research and experiment, our unequalled manufacturing equipment, our years of glass-making experience are your assurance of highest quality when you use Safety Glasses that have the "Pittsburgh" trade-mark etched in the corner of the glass.

When you need Safety Glass for windshields or for windows, for new cabs or for replacement, get in touch with your nearby "Pittsburgh" branch or authorized dealer. Pittsburgh Plate Glass Company, 2159-7 Grant Building, Pittsburgh 19, Pa.

Safety Glass "BY PITTSBURGH"

DUPLATE SAFETY PLATE GLASS · DUOLITE SAFETY WINDOW GLASS

"PITTSBURGH" stands for Quality Glass and Paint

PITTSBURGH PLATE GLASS COMPANY

"The old days were never like this!"



Until recently, Jim never could get away from his paint shop for a little evening fishing. He worked long hours getting "spot repair" colors to match . . . soothing disgruntled customers . . . doing many of his "touch-up" jobs over.

Then he got wise to "Factory Packaged Colors!"

From then on, color matching became easy—and sure! For Martin-Senour's "Factory Packaged Colors" are scientifically mixed by color experts at the factory to the car makers' original specs. Mixing time's eliminated . . . jobs are easier to handle—and get out on time!

Here's all you do—find your colors, by make and model, in Martin-Senour's unique color catalog . . . phone your nearby NAPA Jobber . . . and get the colors you want—fast! For more fishing, and less work, remember "Factory Packaged Colors." The Martin-Senour Co., 2520 Quarry St., Chicago 8.

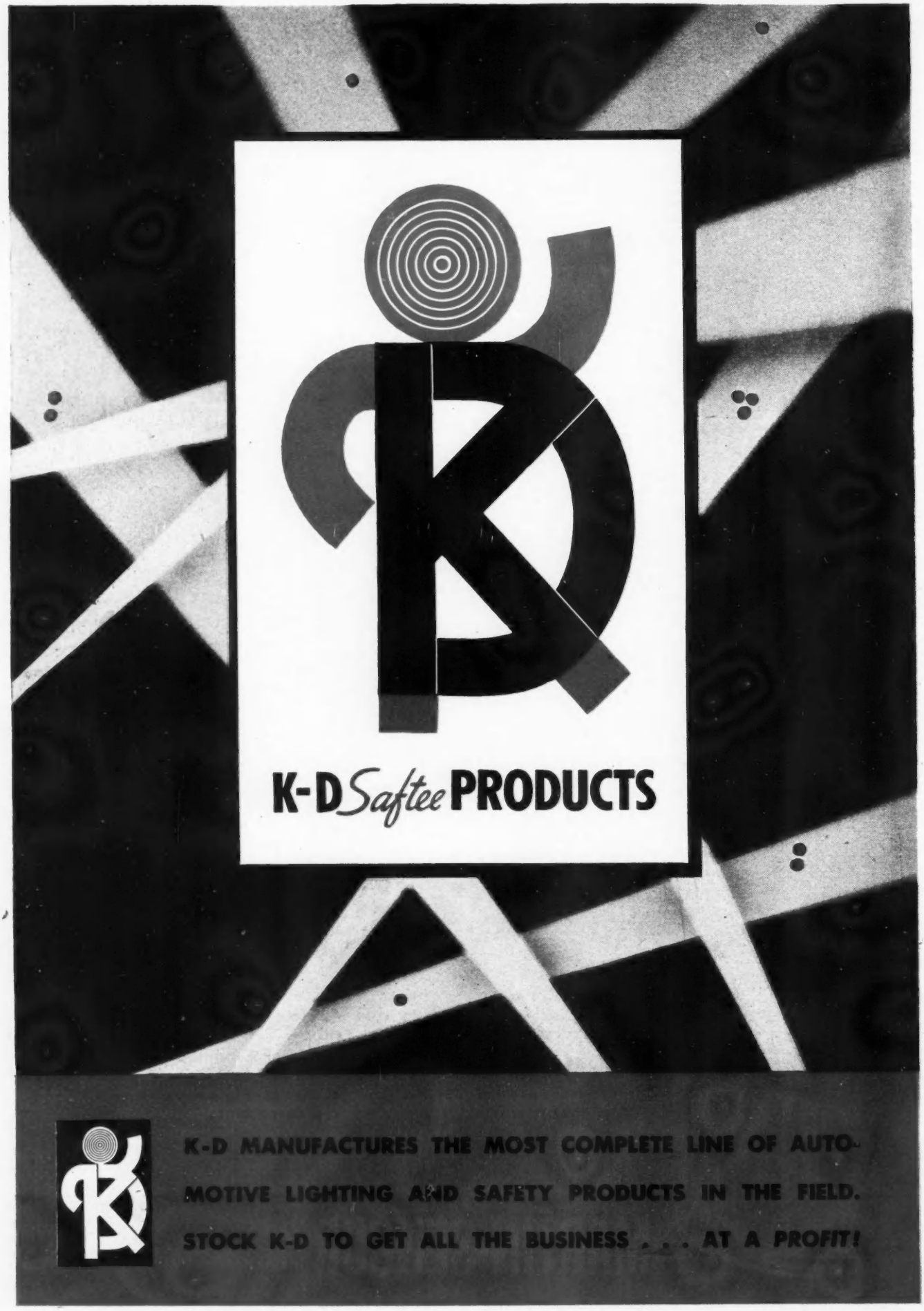
NAPA Assurance of Quality

Available Everywhere—Call Your NAPA Jobber



1. Exact color match to car makers' specs!
2. Eliminates mixing time!
3. Patented pour-top can prevents waste!
4. No comebacks—no headaches!
5. Easier to handle—jobs out on time!
6. Top quality—top beauty—top durability!

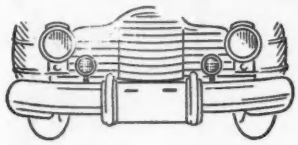
MARTIN-SENOUR *Automotive Finishes*


K-D Saftee PRODUCTS
K-D MANUFACTURES THE MOST COMPLETE LINE OF AUTOMOTIVE LIGHTING AND SAFETY PRODUCTS IN THE FIELD.
STOCK K-D TO GET ALL THE BUSINESS . . . AT A PROFIT!

NEW!

K-D

Introduces Really NEW SEALED-BEAM FOG LAMPS





Long a leader in the field of safety lighting products, and safety equipment for the automotive, farm and construction vehicle industries, K-D is in full scale production with really new, sales-wise, Sealed-Beam fog lamps.

These lamps are the results of K-D's long manufacturing experience and extensive research in this field. Now you can honestly offer fog lamps featuring maximum efficiency and longer life with CAR-OF-TOMORROW STYLING, and designed to fit any car on the road. That adds up to volume, and volume profits! You'll welcome this new addition to the K-D line...get behind it for *added* profits, *easier* sales.



MODEL NO. 891
K-D "JUNIOR" FOG LAMP

4⅜" Diameter Sealed-Beam unit. Ball joint makes it easy to aim lamp. Bumper-bar clamp for quick installation. Vibration-proof grommets for top and underside of gravel pan. Easy to replace Sealed-Beam unit.

NEW WATCHCASE DESIGN FITS ANY TYPE CAR

MODEL NO. 890
K-D "DELUXE" FOG LAMP

Modern design. 5½" diameter Sealed-Beam unit. Adjustable head. Bumper-bar clamp with theft-proof washer. Rubber grommets prevent gravel pan rattle. Easy to replace Sealed-Beam unit.

• CLEAR OR AMBER • CHROMIUM PLATE FINISH •
• FITS SMALL SPACE BETWEEN BUMPER AND GRILL ON MODERN CARS •
• RUGGEDLY BUILT • MAXIMUM LIGHTING EFFICIENCY •

The Best in Automotive Safety Products

THE K-D LAMP DIVISION
NOMA ELECTRIC CORPORATION

Noma Building • 55 West 13th Street • New York 11, N. Y.
Factory: Cincinnati, Ohio

LESS BULK -- COOLER RUNNING



. . . another reason why Cooper Truck Tires make payloads more profitable

Cooper goes one better when it comes to trimming away bulk for cooler running. Not only does Cooper build a stronger, more compact tire of fewer plies . . . but Cooper construction also gives positive protection against growth of the cord body in service.

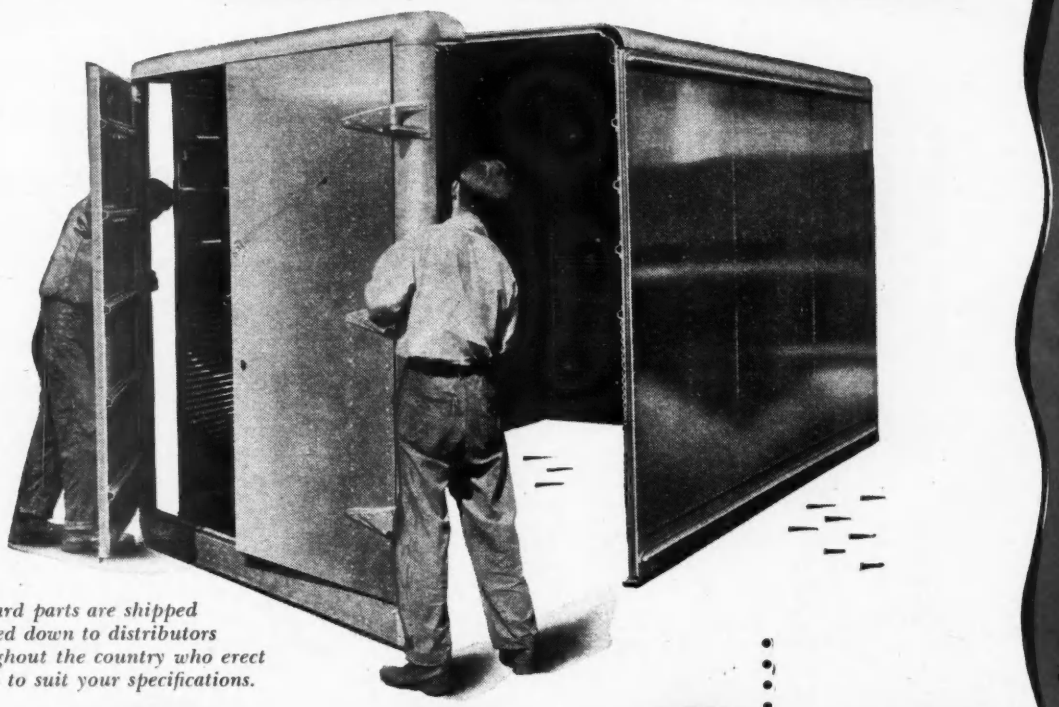
Armored Rayon Cord is the Cooper development that makes possible a truck tire that's all muscle, a tire with better load carrying capacity — even though it has fewer plies to generate heat. And *Distributed Stress Construction* is the Cooper development that keeps truck tires from building bulk in service. This exclusive feature adds extra strength, uniformly distributes tire-killing stress and strain, enables the cord body to retain its strength and stretch much longer.

Naturally, a tire with less bulk runs cooler — gives more original miles, more recap miles too. See your Cooper dealer and arrange to give cooler-running Coopers a try. Put them on your toughest hauls, match them against any other brand. See for yourself why *Cooper truck tires really make payloads more profitable.*



COOPER TIRE & RUBBER COMPANY

Factories at Findlay, Ohio



Standard parts are shipped knocked down to distributors throughout the country who erect bodies to suit your specifications.

ALUMINUM TRUCK BODIES "tailored" TO YOUR TASTE . . .

10,583 body combinations are yours to choose from with the new Reynolds Aluminum Multiple-Assembly Truck Bodies. And every one has these outstanding features that bring increased payload and lower upkeep.

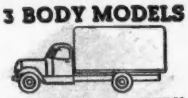
LIGHT WEIGHT . . . Tough war-developed Reynolds Lifetime Aluminum Alloys have a structural strength comparable to steel . . . yet weigh only ⅓ as much. Deadload is turned into payload . . . tire wear cut down.

CORROSION-RESISTANCE . . . Aluminum cannot rust . . . requires no protective painting.

QUICK EASY REPAIRS . . . A Reynolds Body Distributor right in your locality has standard parts in stock. Replacements made immediately . . . no costly delays.

Reynolds is shipping now in unlimited numbers, multiple-assembly truck bodies "tailor-made" to your needs. A few distributor territories are still open. For the name of your nearest body distributor write Reynolds Metals Co., Truck and Trailer Div., 1419-D Dixie Highway, Louisville 1, Ky.

3 BODY MODELS



straight side body (RTBS)



modified wheel-well body (RTBM)



deep wheel-well body (RTBD)

8 INTERIOR LININGS

full-slatted 



full corrugated and or insulated



half-slatted, half-corrugated

and five more types—

15 BACK-DOOR COMBINATIONS



half doors & tail gate



full doors



accordion gate



accordion gate & tail gate

and 11 other combinations

REYNOLDS METALS

REYNOLDS ALUMINUM TRUCK AND TRAILER BODIES

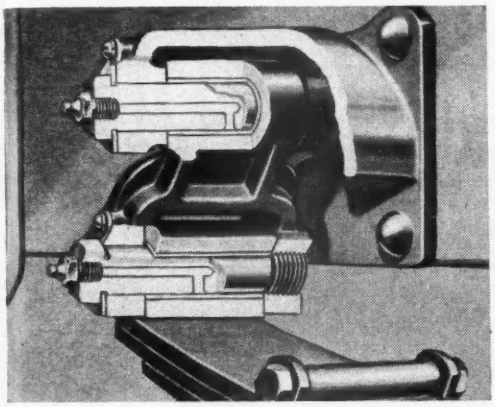
1945-A

The Right Mobilgrease STAYS ON THE JOB!

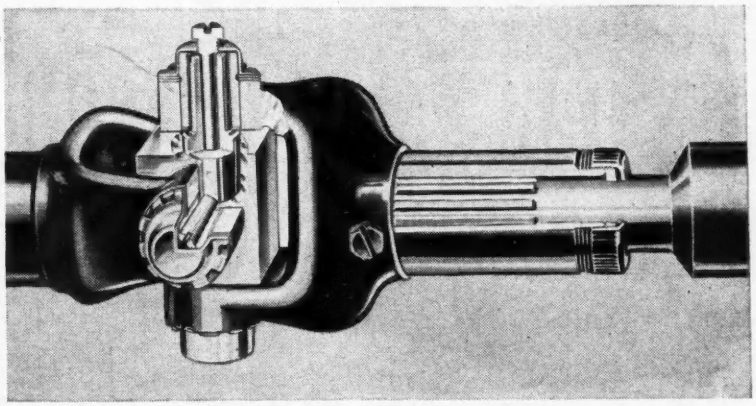


SOCONY-VACUUM OIL COMPANY, INC., and Affiliates: Magnolia Petroleum Company, General Petroleum Corporation

EASY TO APPLY...



SPRING SHACKLES are subject to water-washing and continual shock loads. In spite of these conditions, Mobilgreases stay put and give long-life protection.

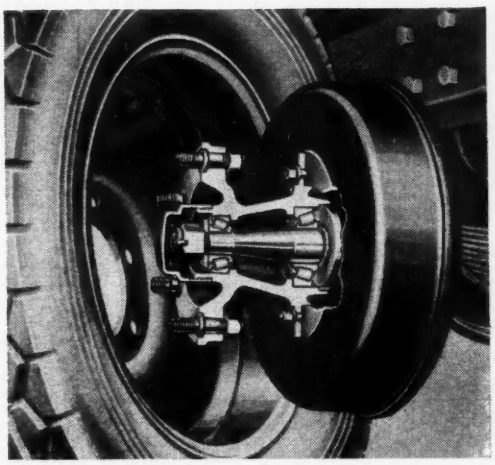


UNIVERSALS are of many different types, each requiring the *exactly right* lubricant to assure trouble-free operation . . . minimum maintenance. It will pay you to consult your Socony-Vacuum Representative.

TO PROTECT truck-bus bearings and shackles, the *best* kind of grease is the *most economical* grease you can buy. That's why more and more fleet operators are using Mobilgreases for every grease-lubricated part.

Easy to handle and apply, Mobilgreases give full protection under the toughest operating conditions in applications for which they are recommended. Their unusual stability and special performance characteristics make them outstanding lubricants for chassis and other vital points.

The *right* Mobilgrease applied in the *right* way at the *right* time means low maintenance costs . . . less "down-time" for repairs. Your Socony-Vacuum Representative can recommend the correct Mobilgrease and schedule of application for each job. Ask him about our tailor-made Fleet Operators' Service.



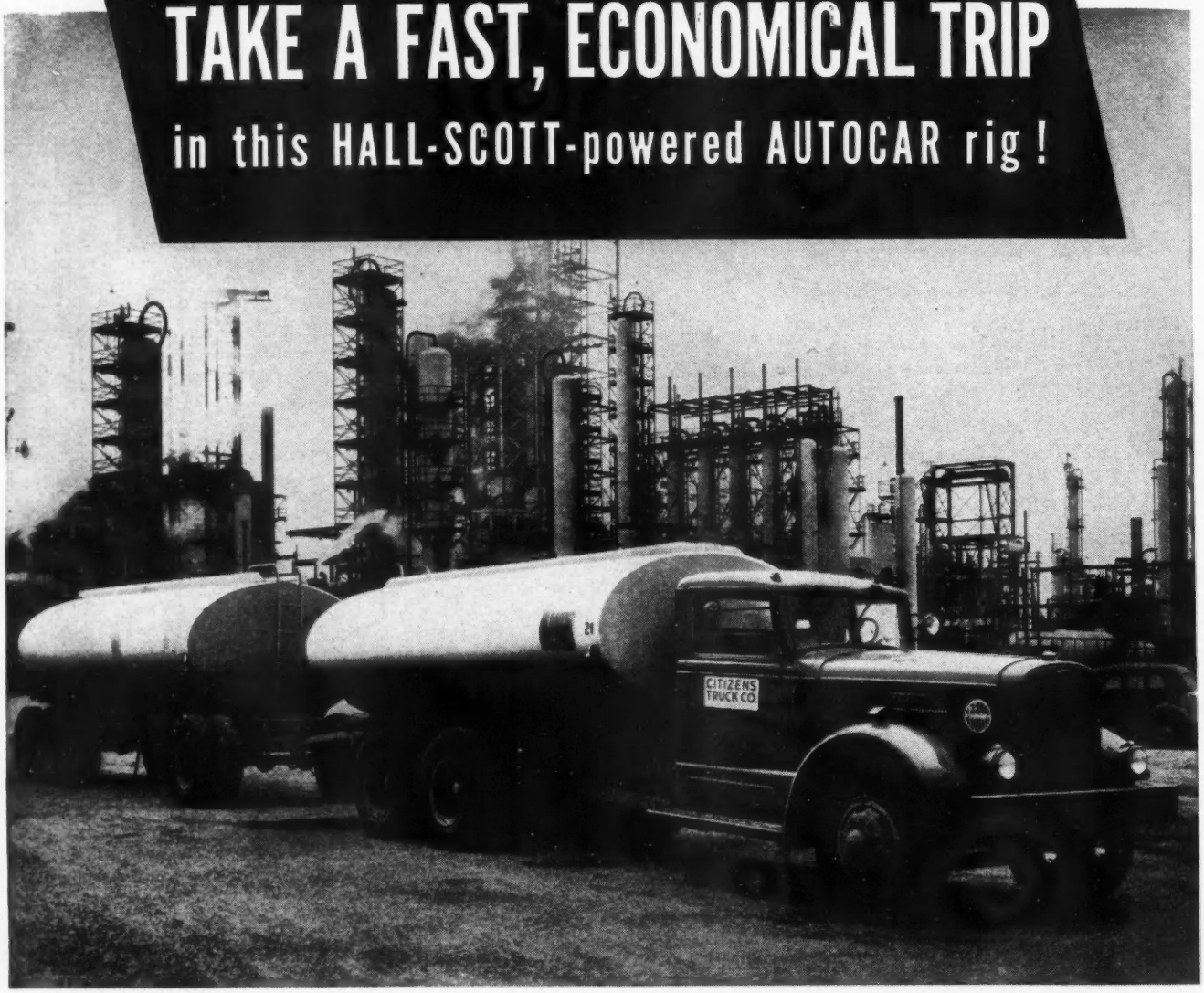
For **WHEEL BEARINGS** Mobilgreases withstand heat from brakes, resist leakage, yet distribute properly to working surfaces at all temperatures.



Tune in THE MOBILGAS PROGRAM—Monday Evenings, 9:30 E.S.T.—NBC

7,400 GALLONS TAKE A FAST, ECONOMICAL TRIP

in this HALL-SCOTT-powered AUTOCAR rig!



Why do Autocar and other leading makers of BIG trucks use Hall-Scott power for *heaviest* duty?

Because the Hall-Scott "400" is the most powerful truck engine built!

Because it maintains speed *up*hill as well as down. Eliminates need for dangerous overspeeding on level stretches and down grades. Helps cut long-haul schedules by *hours!*

If heavy-duty hauling is your business, be sure to get the Hall-Scott story . . . for original equipment or re-powering. Data on request.

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MOTOR CAR COMPANY

Factory and Main Office—Berkeley 2, California

Branches: New York, Boston, Philadelphia, Chicago, Dallas, Los Angeles, Seattle, Berkeley

Division of ACF-BRILL Motors Company

AC'S ASSURE UTMOST RELIABILITY



Today's AC Plugs

Maintain Power **Better**

(a plus value of "Wider Heat Range per plug")

The superior ceramic insulator, now in commercial AC Spark Plugs, *widens the Heat Range* of each type of plug, in each thread size. Each type, consequently, accommodates itself to a *wider* range of engine operating conditions.

As a direct result, misfiring is greatly reduced. Power is far better maintained.

This new insulator is the AC development out of which came the sensational ceramic aircraft spark plugs of bombers and fighters of World War II. It sets a new standard for spark plug reliability, —an advantage that will be worth money to you.

AC's assure Utmost Reliability.

AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION

★ ★ ★

AC SPARK PLUGS

NEW! FREE!

WRITE! get yours!



HERE'S YOUR NEXT JACK!

. . . and it's a honey!

Fitter than ever—improved in design and materials—born of million-jack experience in war and peace—tested and proved the hard way—each new Ausco Jack* is an automobile man's idea of what a top-flight jack should be like and what it should cost! Many of them are ready for delivery, the rest are coming fast.

Write today for your new Ausco Jack Catalog, get those orders in now for early delivery—be set with jacks to use or sell, at a profit either way! . . . AUTO SPECIALTIES MANUFACTURING COMPANY, St. Joseph, Michigan; Benton Harbor, Michigan; Hartford, Michigan; Windsor, Ontario, Canada.

Watch **AUSCO** *for the latest in Mechanical and Hydraulic* **Jacks**

* Ausco trademark Reg. U. S. Pat. Off. ***Fully Patented**

2168



What's wrong with being a "yes" man?

If it's a case of saying, "Yes . . . we can do the job," there's nothing wrong with being a "yes" man.

And there's one way to be sure of being that kind of "yes" man. That is to use MoPar Service Packages for repair and replacement jobs on cars and trucks manufactured by Chrysler Corporation divisions.

MoPar Service Packages give you in one handy package the *right* parts and *all* the parts you need for a specific repair job—for water pumps, universal joints, brakes and the like. And they're factory engineered and inspected for accurate fit and high quality.

That means faster, easier work for you. And it means long, dependable performance of your cars and trucks.

CHRYSLER CORPORATION—PARTS DIVISION
DETROIT 31, MICHIGAN

You don't have to guess where to get MoPar *service packages*



You can get MoPar Service Packages and individual parts for Plymouth, Dodge, De Soto or Chrysler cars, and Dodge *"Job-Rated"* Trucks from dealers for these vehicles.

USE CHRYSLER CORPORATION PARTS DIVISION
MoPar
PARTS AND ACCESSORIES
FACTORY ENGINEERED AND INSPECTED

Factory Engineered and Inspected for

PLYMOUTH · DODGE
DE SOTO · CHRYSLER CARS
DODGE *"Job-Rated"* TRUCKS



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Exceptionally good workability and simplicity of application have made Ditzler DQE the long-time favorite of repaint men. DQE is famous for its fast setting qualities—brilliant lustre—firm adhesion—outstanding durability.

Ditzler Color Division, Pittsburgh Plate Glass Company, 8000 W. Chicago Ave., Detroit 4, Mich.

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BUDA

power-proved

DIESELS



Sterling
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4 WHEEL DRIVE TRUCKS
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Available in These TRUCKS and OFF-HIGHWAY EQUIPMENT

Featuring 4 GREAT ENGINES

on their record of *ON-THE-JOB* PERFORMANCE!

TWO SIXES — the "844" / the "844" *SUPER*

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WORLD-WIDE SERVICE AND PARTS

BUDA

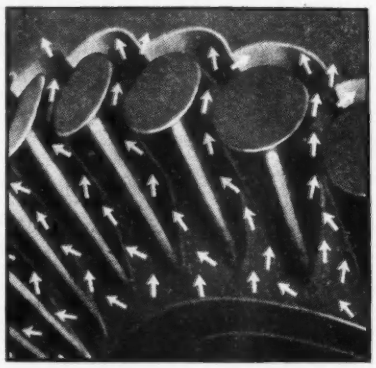
15459 Commercial Avenue
HARVEY *(Chicago Suburb)* ILLINOIS

SWELTERING TIRES SOON COLLAPSE

BEAT THE HEAT WITH GILLETTE



Truck operators know that too much heat plays havoc on truck tires. The rubber becomes flabby. The cords lose their resilience. The tire loses its stamina and wears out before its time. With Gillette, heat is kept under control. That's the secret of Gillette's long life and low-cost maintenance!

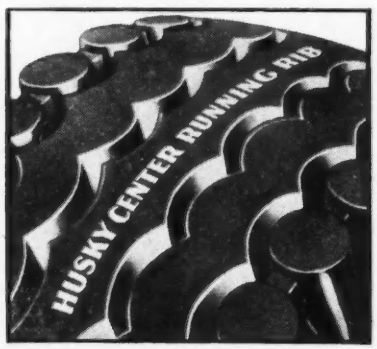


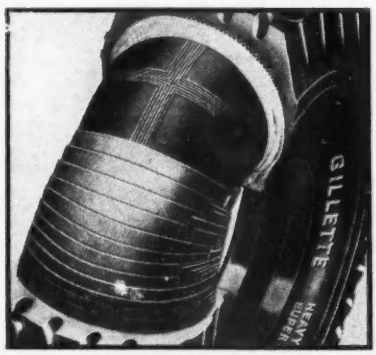
Cooler at the Shoulder

Gillette's exclusive deep cut stud design at the shoulder eliminates excess heat-generating rubber—allows cooling air to circulate.

Cooler at the Tread

100% natural rubber tread runs cooler. There's no center groove — the spot most vulnerable to strain. Husky center running rib puts strength where it is needed most for easy riding, long mileage. POWERWAVE tread fights off costly groove cracking.





Cooler at the Cords

Gillette's Hi-tensiled Rayon builds up less heat, withstands flexing far better. Gillette Truck tires can be recapped over and over again.

A BEAR FOR WEAR

GILLETTE

TRUCK TIRES

Gillette Tires • Division of United States Rubber Company • 1230 Avenue of the Americas • New York 20, N. Y.

LINCOLN

LUBRICATING EQUIPMENT

Guarantees the "FINEST" in Fleet Lubrication Service...

Single Units or Complete Systems



Lubrication maintenance is a most important factor in "Per Mile" costs regardless of the size of fleet operation.

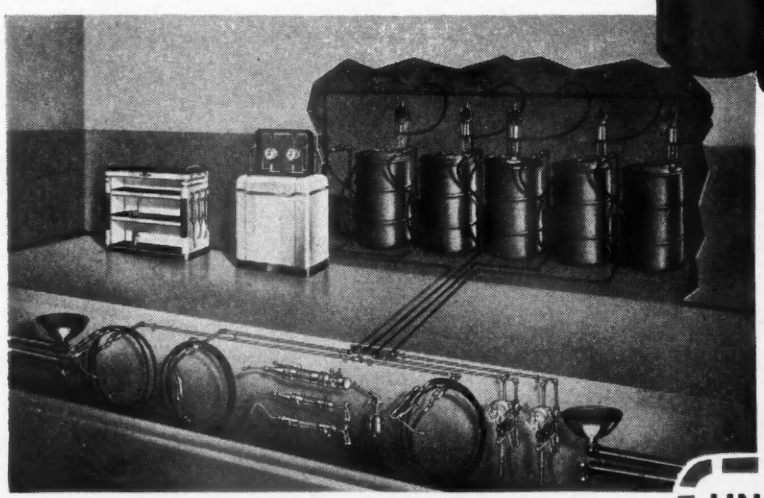
The efficiency and economy of Lincoln Equipped Lubrication Departments has helped thousands of operators save maintenance manhours, and reduce road breakdowns – adding more revenue miles under all driving conditions.

From single units to complete installations, – *you can depend* on Lincoln Lubricating Equipment to help give added service life to your rolling stock.

Model 346P—Air-Motor Operated High-Pressure Chassis Lubrigun—100-lb.

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Complete Lincoln Lubricating Systems Engineered to Your Requirements

At left is illustrated a complete Lincoln Lubricating System for bus or truck operators. Variations of this system are available to meet your particular requirements. Lincoln representatives, located in all principal cities, will be glad to assist you in planning or installing the lubrication department best suited to your needs. The coupon below will bring you complete information.

LINCOLN

Pioneer Builders of Engineered Lubricating Equipment

LINCOLN ENGINEERING COMPANY

5701 Natural Bridge Ave., St. Louis 20, Mo.

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I would like to have literature on Lincoln Lubricating Equipment ☐. I am interested in a complete lubrication system ☐.

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*Firm*_____

*Address*_____

*City*_____ *State*_____

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Across the Country

AND THROUGHOUT THE WORLD

Standard and Special DAVISBILT Tanks

Prove their claim of Profitable

Road Performance



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For more than 33 years DAVISBILT has meant BETTERBILT.

Specialists, engineering exclusively in the field of Fluid Carriers.

THE DAVISBILT PRODUCTS COMPANY

AFFILIATED WITH LIBERTY AIRCRAFT PRODUCTS CORP.

CINCINNATI, OHIO

YOUR Kellogg-American COMPRESSOR IS YOUR SILENT PARTNER

Serving you in nearly every phase of your business, your KELLOGG-AMERICAN compressor . . . your *silent partner* . . . helps you build more profits. And he does it quietly, smoothly, dependably and efficiently. Plan to replace your old compressor with a *new* KELLOGG-AMERICAN *silent partner. American Brake Shoe Co., Kellogg Division, Rochester 9, N. Y.*

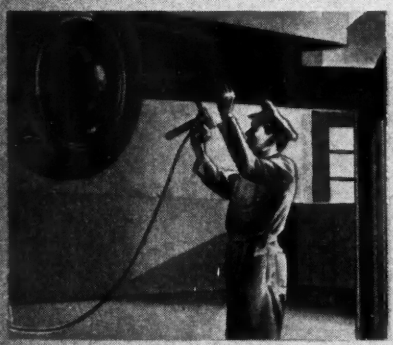




AIR TOOLS



TIRE INFLATION



LUBRICATION



SPRAY PAINTING



ENGINE CLEANING



AIR HAMMER

More Air per Dollar

A PRODUCT OF

AMERICAN Brake Shoe COMPANY

KELLOGG DIVISION

here's the *Smoothest-Working Combination* for any sanding job

SIOUX
High Speed Sanders

Ball-bearing construction, heat treated alloy steel gears, permanent lubrication. Cyclone fan for increased ventilation and patented tool spindle lock for changing discs. 3 Models: No. 1250—9" High Speed Heavy Duty; No. 1267—7" High Speed Heavy Duty and No. 1265—7" Special.

SIOUX
RESIN BOND Abrasive Discs

Cut faster with less effort. They're flexible, tough, long lasting, non-loading, give maximum cutting action and remain cool. It's the ideal disc for any and all sanding operations.



No. 1267 SIOUX Heavy Duty Sander (illustrated) No load speed 4250 R.P.M. Universal motor operates on A.C. or D.C. Overall length 15"—weight 13½ lbs. A very popular model.

Sold only through authorized SIOUX Distributors

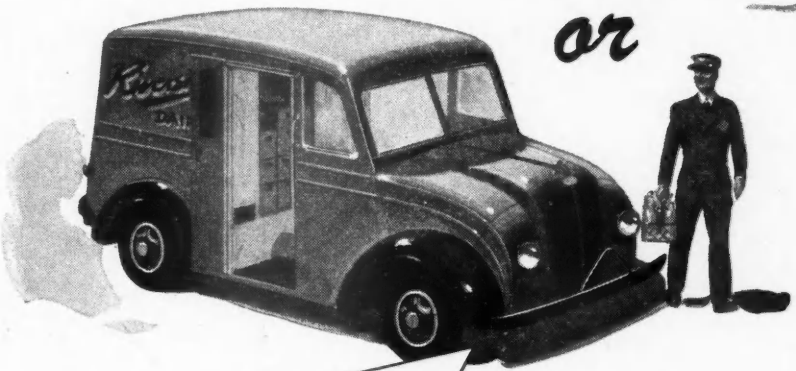
STANDARD THE WORLD OVER

ALBERTSON & CO., INC. SIOUX CITY, IOWA, U. S. A.

HOUR AFTER HOUR—



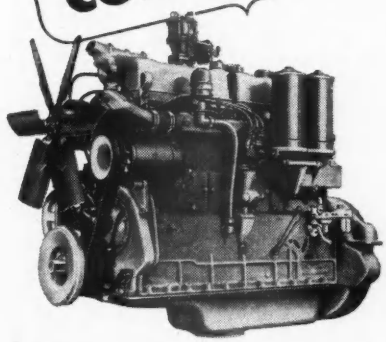
or



HOUSE TO HOUSE

POWER BY Red Seal Engines CONTINENTAL

CONTINENTAL MOTORS — Pioneers in Power for Every Nation — AMERICA'S STANDARD



R-572 *Red Seal transportation engine is one of three 6-cylinder overhead engines of the R series. These engines develop from 110 to 170 Tru-Rated horsepower — the actual usable horsepower after deductions for pumps, fans and other accessories.*

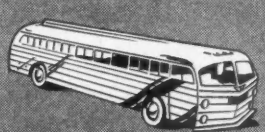
BUILT FOR THE JOB

SPECIALIZED RED SEAL TRANSPORTATION ENGINES PROVIDE ECONOMICAL, RELIABLE SERVICE

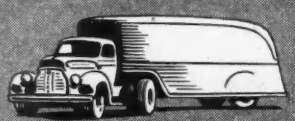
There are 27 Continental Red Seal transportation engines to meet the specific power needs of any automotive application. These engines, with a range up to 170 true-rated horsepower, include both overhead and L-head types for operation on gasoline, fuel oil or butane. Continental also produces a line of heavy-duty Diesel transportation engines. No two Red Seal transportation engines have identical power and performance characteristics. Hence, no matter what your need, one or more engines in this specialized transportation line is sure to be ***built for your job.***

Continental Motors Corporation
MUSKEGON, MICHIGAN

45 YEARS' SPECIALIZED EXPERIENCE BUILDING ENGINES FOR TRANSPORTATION, INDUSTRY, AVIATION AND THE FARM



BUSSES



TRACTORS



TRUCKS





Model 521

Confidence in Kenworth, oldest and largest truck and bus manufacturer in the West, has been built steadily throughout the years by the performance records of the many heavy duty Kenworth trucks in service in all transportation fields.

Kenworth's heavy duty highway freight trucks move tremendous loads with speed and endurance. They are engineered to meet all highway challenges . . . long, non-stop trips . . . the constant grind of mountain grades . . . extreme variations in weather and road conditions. Repeat orders from countless progressive and satisfied Kenworth users attest to the superiority and dependability of Kenworth trucks in meeting and beating schedules, keeping operating costs to a minimum.

Consult Kenworth for the truck engineered to do your particular transportation job better, faster and more economically.

KENWORTH

TRUCKS ★ BUSES

FACTORY AND HOME OFFICE: SEATTLE • DISTRIBUTORS IN PRINCIPAL WESTERN CITIES AND HAWAII



on the record—

or on the road—

the best brake is AIR

The most satisfactory thing about Air Brakes, as an investment, is that their remarkable performance never shows up in higher costs. In fact, they pay for themselves in smoother braking, lowered maintenance costs, added payloads, and lessened driver fatigue. Whether you are looking at the problem from behind the steering wheel, or from behind the balance sheet, there can be no argument that the best brake is AIR, and the best Air Brake is Bendix-Westinghouse!

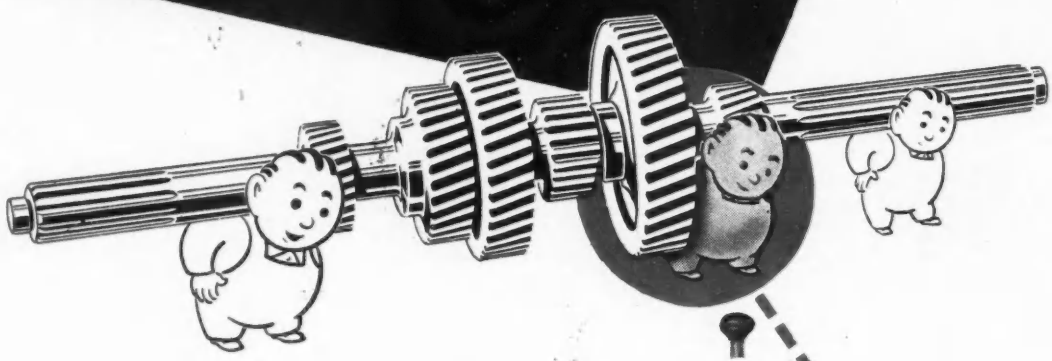
BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY • ELYRIA, OHIO

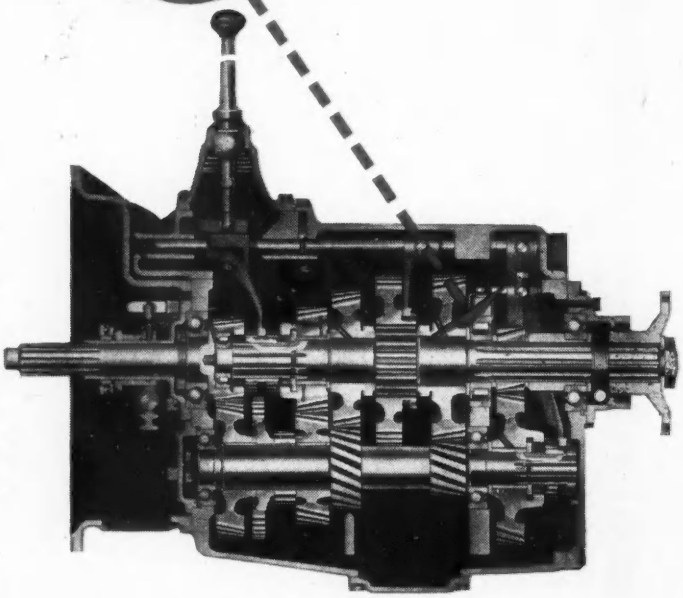
BENDIX-WESTINGHOUSE GENUINE AIR BRAKES

the best AIR brake is

Bendix-Westinghouse

An *Extra* Shoulder under the shaft





Giant new engines going into today's extra-tough services have brought new problems to the designers of dependable transmissions. One challenge successfully met by Fuller Manufacturing Company engineers was to provide adequate support for the main shaft in the five-speed Model 5A920. Three bearings . . . an extra one . . . are used to support the shaft . . . making the span between bearings no greater than for a four-speed transmission.

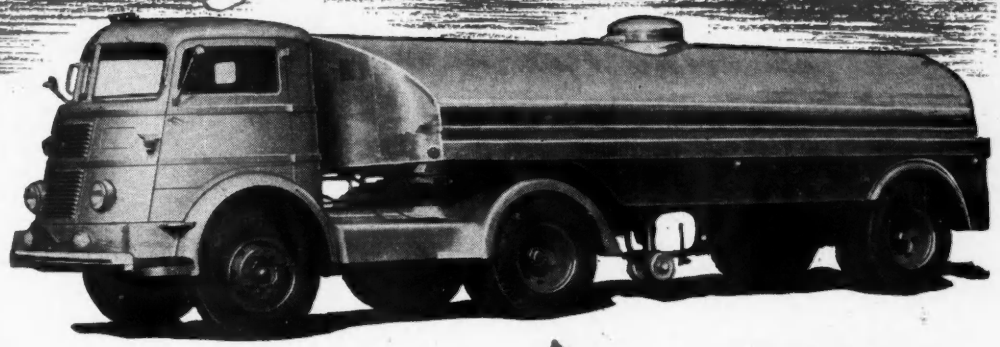
Such careful attention to problems of design . . . together with precision craftsmanship and painstaking testing of transmissions and auxiliaries . . . are reasons why the Fuller Model 5A920 Heavy-duty Transmission is the best in its class . . . best for engines developing 200 to 300 hp.

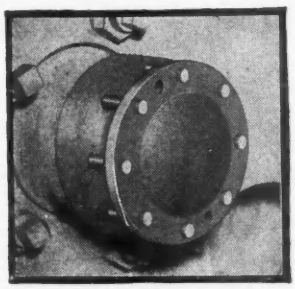
FULLER MANUFACTURING COMPANY, TRANSMISSION DIVISION
KALAMAZOO 13F, MICHIGAN
Unit Drop Forge Division, Milwaukee 1, Wisconsin

Fuller TRANSMISSIONS

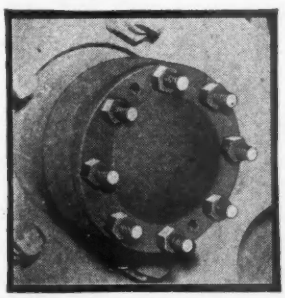
FLEET OPERATORS ACCLAIM . . . .

TRUCK TROUBLE *Insurance*

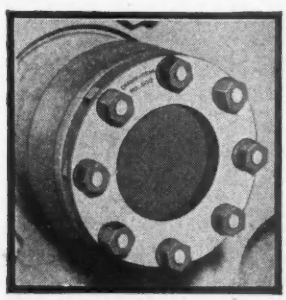




1 Remove standard nuts and studs. Install longer studs furnished with kit; replace axle, using old nuts.



2 Remove axle shaft "pull-out" studs.



3 Place lock ring against hexagon nuts and use lock washers and hexagon nuts furnished with kit. Draw up tight.

REAR AXLE STUD LOCKING RINGS

U. S. PAT. No. 2,350,439

FOR ALL POPULAR TRUCKS

Lock all studs together as one unit; provide the extra bearing, stop rock at tip and your stud troubles are over.

Champ-Items Rear Axle Stud Locking Rings fit about 95% of all trucks. Check these specifications against your equipment to determine proper Kit. These patented rings—made of steel—come in complete Kits for each truck or bus.

Bolt Circle Diameter	Diameter of Stud	Number of Studs per Wheel	Champ-Items Stock Number
3⅞"	Std. 7/16"	8	No. 500
3⅞"	Std. ½"	8	No. 500A
4¾"	Std. 7/16"	8	No. 501
5⅜"	Std. ½"	6	No. 502
5⅜"	Oversize 9/16"	6	No. 502A
5⅜"	Std. ⅝"	6	No. 502B
4½"	Std. 7/16"	8	No. 503D
5 1/32"	Std. 7/16"	8	No. 504D
5 7/16" or 5½"	Std. 7/16"	12	No. 515
5 7/16" or 5½"	Oversize ½"	12	No. 515A
3⅞"	Oversize 7/16" x ½"	8	No. 516
4¾"	Oversize 7/16" x ½"	8	No. 517
5⅜"	Oversize ½" x 9/16"	6	No. 518
5 5/16" or 5⅜"	Std. 7/16"	8	No. 519
5 5/16" or 5⅜"	Oversize ½"	8	No. 519A
4"	Std. ⅜"	6	No. 520

Packed individual sets of: 2 lock rings — all necessary Special Studs — Lockwashers and Nuts.

LIST $8.00 PER SET

ORDER FROM YOUR JOBBER

Write Us For Complete No. 500 Specification Sheet

RE-CONDITIONING CHAMP-ITEMS INC. SHORT CUTS

CHAMP-ITEMS, INC.

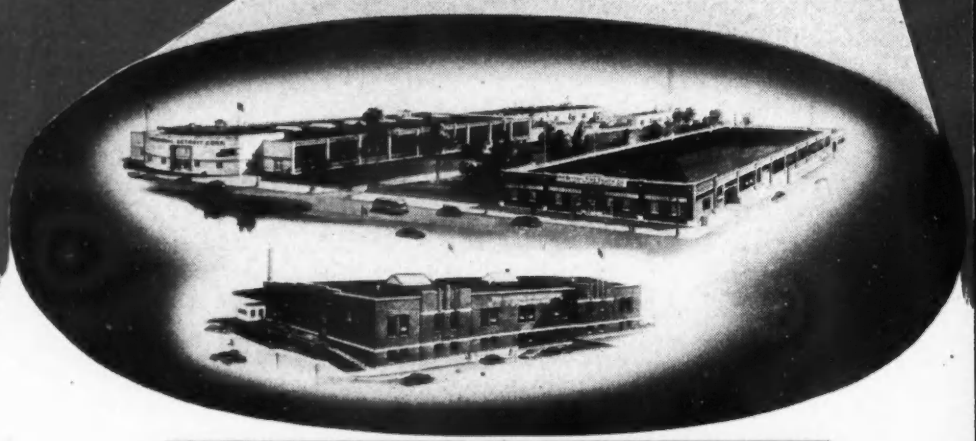
6191 MAPLE AVENUE ST. LOUIS 14, MO.

NATIONAL SERVICE

20 GENERAL Branches and Warehouses To Serve You . . .

Through its branch offices and distributors in every section of the country, GENERAL serves all American industry. One of these outlets is nearby to provide you with prompt delivery and experienced fire protection counsel. Shown below are the three GENERAL plants in Detroit. Call on your GENERAL representative for dependable fire protection.





THE GENERAL DETROIT CORP.

Manufacturers of Fire Extinguishers
Motor Fire Apparatus and Allied Equipment

2270 E. JEFFERSON • DETROIT 7, MICHIGAN

NEW YORK • PHILADELPHIA • ATLANTA • CHICAGO • DALLAS

West Coast Affiliate: The General Pacific Corp.

Los Angeles San Francisco Seattle

Distributors in Principal Cities

IF IT'S GENERAL IT'S DEPENDABLE



S. O. S. FIRE GUARD Vaporizing Liquid Extinguisher—America's great utility fire fighter. Effective on oil, electrical, grease, and gasoline fires. Will not freeze at 48° below zero. 1 qt. and 1½ qt. sizes.



CD-SNO FOG Carbon Dioxide Extinguisher. Kills fire instantly, yet cannot damage equipment, premises, or personnel. Effective on electrical, oil, and gasoline fires. Sizes 2 to 100 lbs.



RED STAR Soda Acid Extinguisher. Releases strong stream of water under chemical pressure. Immediately effective on wood, paper, or textile fires.



FLOAFOME Foam Type Extinguisher. Smothers fire under a blanket of foam. 2½ gallon size produces 22 gallons of foam. For use on wood, paper, textile, oil, and gasoline fires.



ALASKAN and PROTECTOR Pump Type Extinguishers. For wood, paper, or textile fires. Range is 45 feet. Non-freeze charge protects at 48° below zero. ALASKAN—2½ gallons; PROTECTOR—5 gallons.



PACEMAKER Knapsack Type Extinguisher. Can be strapped on back and operated from that position. Telescopic pump nozzle leaves both hands free for fighting fire. Ideal for outdoor fires.



the Only
COMPLETE CATALOG . . .
on Wheel Balance Weights and Equipment

The Harley C. Loney Company's particularly close relationship with the automotive industry tire, wheel, rim and balancing equipment manufacturers — and its own years of experience — have made this complete catalog on wheel balance weights and equipment possible. At your fingertips are truck-bus rim types produced in United States and Canada, as well as universal balance weights for passenger cars and all truck or bus requirements.

A complete reference book for wheel, rim or tire salesmen. . . . No progressive automotive service shop can afford to be without it.

WRITE US FOR YOUR *Free* COPY TODAY



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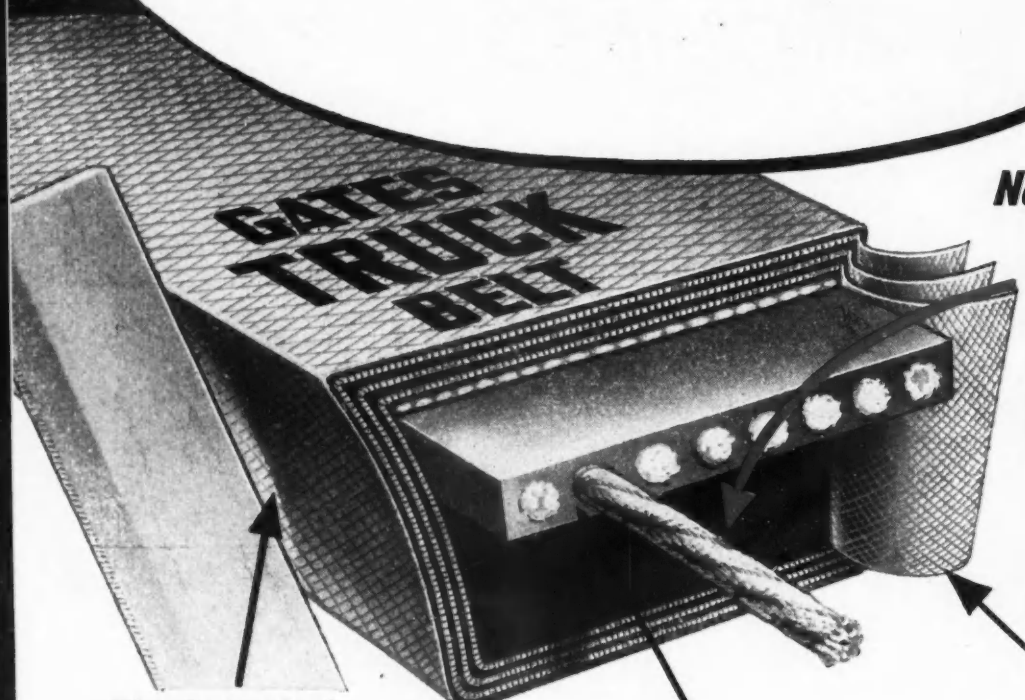
BALANCE L&H WEIGHTS

DETROIT 21, MICHIGAN

For More Than 5 Years

The Nation's Biggest Truck Belt Users Have Said *In Writing:*

"This Gates Belt Gives 50% to 80% Longer Wear"



Now—

RAYON CORDS

of extremely high tenacity have still *further increased* the service life of the belt.

***The Patented* CONCAVE SIDE**

Like all Gates Belts, the Gates Truck Belt is built with the famous, life-prolonging Concave Side—a Gates Patent.

***Special* HEAVY DUTY COMPOUND**

MULTIPLE-PLY COVER

Much Longer Wearing Than on Passenger Car Belts



MAKE SURE That the Truck Belt YOU Get is Marked With This T*

Look for the letter "T" on the belt itself—as well as on the label—of every belt you buy for truck service. "T" means that the belt has been specially engineered for TRUCKS and BUSES. You can be sure of getting the belt designed for this more demanding service only by seeing to it that you are delivered belts which bear this letter "T."

*REG. U. S. PAT. OFFICE

Read What the Biggest *TRUCK BELT USERS Say:*

Note: These exceptional service records were made EVEN BEFORE The Gates Truck Belt was still further improved by RAYON CORD CONSTRUCTION!

80% LONGER WEAR

Chicago, Ill. "We are getting 80% longer wear than any other belt ever gave us." All American Bus Lines.

MANY MORE MILES

Geneva, N. Y. "...many more miles of service than even pre-war belts." Market Basket Corp.

USE ½ AS MANY BELTS

Newark, N. J. "Since adopting Gates Truck Belts we are using only half as many belts as before." Bloomingdale Dairy Co., Inc.

70% INCREASED LIFE

Lexington, Ky. "We have increased belt life about 70% with your Truck belts." Lexington Railway System.

The *ONE* Belt That is *Specially Engineered* for TRUCKS and BUSES

Now—

RAYON CORD Construction

Gives You *EVEN GREATER SAVINGS*

You Know How Greatly *RAYON CORDS* Increase the Service Life of *TRUCK TIRES!*

Why Not Have This SAME ADVANTAGE in Your TRUCK BELTS?

You wouldn't think of using a passenger-car tire on a truck. Naturally not.

Truck service is tougher. The loads are heavier. You need a bigger, stronger, more rugged tire—and you want, moreover, a tire **that is built with Rayon Cords!**

Why not apply this same clear thinking to belts? Horse-power loads on Truck belts are fully 3 times the load on passenger-car belts. There is much more strain in starts and stops, more frequent speed changes, longer running hours, more rapid acceleration and abrupt deceleration. Truck service is just as much tougher on belts as it is on tires!

If, then, you wouldn't use a passenger car tire on a truck, why use a passenger car belt?

Just as you have found that it pays to use a tire that is specially engineered for trucks, just so hundreds of the nation's biggest belt users have found that it pays to use the one belt that is specially engineered for trucks — the ONE belt, moreover, that is built with Rayon Cords—the Gates Truck Belt.



Read, on these pages, the statements of just a few prominent users of Gates Truck Belts. Note that for years they have been getting 50% to 80% longer wear—cutting their belt costs actually in half, or **even more.** Consider, too, the even more important savings in valuable operating time due to fewer road failures and fewer delays for servicing.

If you, too, want these advantages—if you want to keep YOUR trucks and buses operating most efficiently and economically — call your Gates Jobber and tell him to send you a trial order of the one Belt built with Rayon Cords—the one belt specially engineered for truck service—the Gates Truck Belt.

The Gates Rubber Company
Denver, U. S. A.
World's Largest Makers of V-Belts

Gates

THE MARK OF SPECIALIZED RESEARCH

T-4

WEARS 75% LONGER

Nashville, Tenn.
"...gives about 75% longer wear than any other belt we ever used." Wilson Truck Co., Inc.

80% TO 100% BETTER

Kansas City, Mo.
"Gates Truck Belts are doing an 80% to 100% better job for us." Adams Transfer and Storage.

80% LONGER LIFE

Omaha, Nebr.
"Our records show 80% longer life for Gates Truck Belts." Watson Bros. Transit Co.

BIG CUT IN COSTS

New Orleans, La.
"...plays an important part in keeping our maintenance costs down." Yellow Cab Co.

75% MORE SERVICE

San Angelo, Tex.
"We're getting 75% more service than from any other belt we ever used." Beard Machine Shop.

CUTS SERVICE DELAYS

Oakland, Calif.
"We are getting ful 75% longer wear wi corresponding reducti in servicing time a belt adjustment delays Carnation Milk Co.



WARD LAFRANCE TRUCK DIVISION
Great American Industries, Inc.
ELMIRA, NEW YORK



HEIN-WERNER HYDRAULIC JACKS ARE

NOW AVAILABLE..

IN EVER-INCREASING QUANTITIES



• More than a quarter of a century of specialized experience stands behind the millions of hydraulic jacks made by Hein-Werner. You just can't beat today's H-W Jacks for safe, dependable performance.

Exclusive and outstanding features include LARGE SLED BASE that won't tip . . . HEINITE PISTON which withstands ten times the wear of conventional cups or packing . . . and BALANCED HANDLE SOCKET.

All H-W models are factory-tested at 1½ times rated capacity.



SHOP "SERVICE" JACKS, TOO!

Complete line includes models of 1½, 3, 5, 8, 12, 20, 30, 50 and 100 tons capacity. Also Bumper-Lift Jacks for passenger cars and four wheel service jacks for shop use.

See your jobber . . . or write us for details

HEIN-WERNER CORPORATION
WAUKESHA, WISCONSIN

Hein-Werner
HYDRAULIC JACKS



The Line of Least Resistance

Here's an unbeatable combination! Cable products carrying the Whitaker label offer least resistance to sales—and least resistance to conducting full flow of current for starting, lighting and ignition . . . Available through aggressive jobbers everywhere.

WHITAKER LABEL ASSURES QUALITY CABLE

KANSAS CITY, MO.
ST. JOSEPH, MO.

WHITAKER
CABLE CORPORATION

PHILADELPHIA
OAKLAND

Pioneers and leaders in automotive cable products since 1920



See why there is no substitute!

There's a **CONE** in the DeLuxe cartridge because it takes **DEPTH** to cleanse oil! The cone feeds the oil from the bottom through the entire depth of the cartridge to the top of it! That's not all! The space in the cone allows time for heavy particles to drop into the sump below, thus increasing the life of the cartridge.

Cotton cartridges tend to compress when oil is fed through them, thus impeding and sometimes entirely stopping the oil flow through the cartridge. To prevent this, DELUXE cartridges have a SPRING which guarantees the maintenance of the original cartridge size.

REMEMBER—ONLY DELUXE CARTRIDGES HAVE THE BUILT-IN CONE and SPRING and both are essential to FILTRATION that *ACTUALLY CLEANSES OIL!*

You'll find over ninety per cent of the new Dodge Trucks are equipped with DeLuxe Oil Filters! It's important that these filters be serviced with genuine DeLuxe refill cartridges. Why? Simply because the cartridge of a DeLuxe filter is different from that of any other make... its exclusive spring and cone construction are essential to proper operation! DELUXE CARTRIDGES ARE AVAILABLE THROUGH DELUXE JOBBERS FROM COAST TO COAST. DeLuxe Products Corp., 1406 Lake Street, LaPorte, Indiana. SEE YOUR DELUXE JOBBER TODAY!

DELUXE Oil Filter

DOES MORE THAN STRAIN OIL... MORE THAN FILTER OIL
ACTUALLY CLEANSES OIL

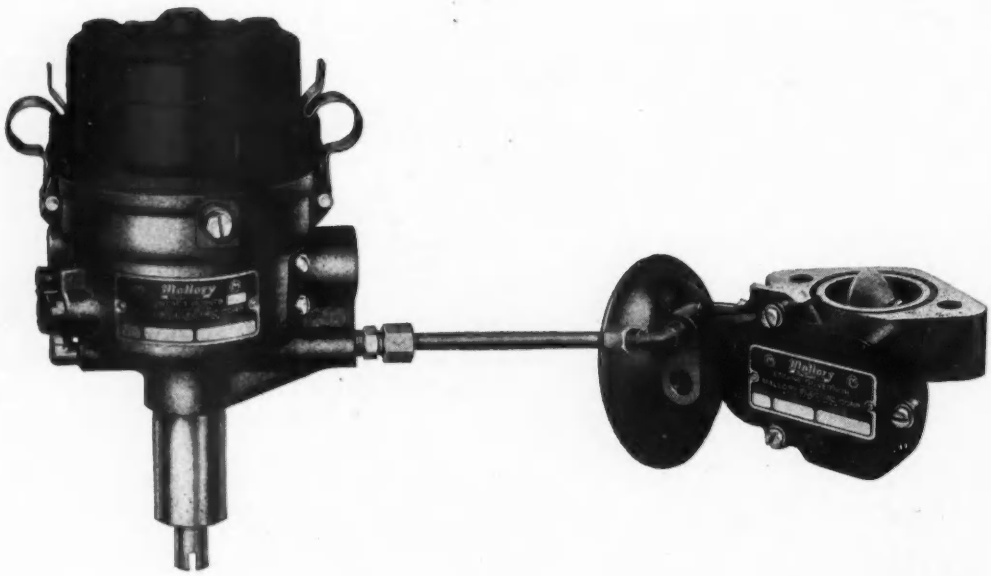
2198

THE NEW

Mallory

REGISTERED U. S. PATENT OFFICE

Distributor-Governor Combination



FLEET OWNERS! EQUIP YOUR FLEET NOW WITH THE NEW MALLORY DISTRIBUTOR-GOVERNOR COMBINATION

Because:

1. When the slightest load is applied to the engine, the Mallory Governor immediately responds to maintain the governed speed.

2. The Mallory Distributor-Governor combination can be installed on any engine in the field. Hence, *your engine is now equipped for the installation of a Mallory governor.*

3. There are no flyweights or throttle linkages in the Mallory governor.

4. The Mallory Governor has few moving parts so that wear and maintenance are low: hence, the governor is *dependable.*

5. The Mallory governor can be adjusted to control engine speed within a variation of 100 RPM, and can be set to govern at any speed between 1000 and 3000 RPM *without surging or power loss.*

6. The Mallory governor throttle does not interfere with the carburetor throttle since they both open in the same direction; hence, a thin "sandwich" can be used with it which does not raise the carburetor excessively.

7. The ordinary Sandwich Governor inherently leans the carburetor mixtures under low load at the governed speed causing the engine to surge excessively. The Mallory governor will not cause engine surging under these conditions.

8. With a Mallory distributor the electrical resistance is so low that a hotter spark is produced with less current.

9. The Mallory heavy duty distributor provides four separate adjustments to obtain the desired spark curve; hence the spark curve for any engine can be obtained with the Mallory distributor.

10. The Mallory Electric Corporation concentrates only on "quality" products; therefore the very best engineering and materials go into the manufacture of the Mallory Distributor-Governor combination.

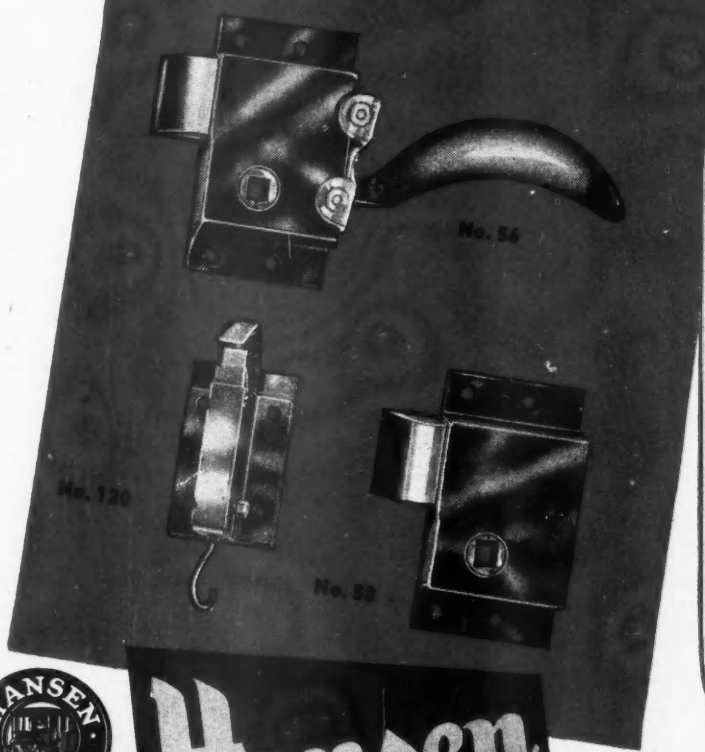
REMEMBER: *IF A MALLORY PRODUCT COSTS MORE . . . IT'S WORTH MORE!*

Mallory Means Quality

Ability and Flexibility



with HANSEN HARDWARE



MECHANICAR general repair body shown above was built by the Karl Kofoed Body Co., San Francisco, Cal. Hansen Hardware was used to insure service-*ability*, and because of its *flexibility* of application to various types of bodies.

Subjected to continual, severe service, Hansen stands up and lasts indefinitely. It often outlasts the body on which installed. Simple in design, easy to apply, dependable, Hansen is used on the majority of custom-built bodies.

No. 56 Cab Lock. Inside handle. Locking device. Size, 3⅜" x 2", 3¼" handle, 1" striker bolt.

No. 58 Cab Lock. Die-formed bushing. Size, 2" x 3⅜". Easy to install. No mortising.

No. 120 Lock with hook. Opens from inside of door. Take-up bolt insures silent, tight doors.

Write for folder and further details.

A. L. HANSEN MFG. CO.
5047 RAVENSWOOD AVE.
CHICAGO 40, ILL.

HANSEN HARDWARE for Commercial Bodies

Hansen

The Hardware for Hard Wear

Millions of Recorded Tire Miles Tell

Firestone TIRES Deliver the MOST

"WE GET LONGER MILEAGE FROM FIRESTONE TIRES"



"Firestone tires save us money by helping to cut our operating costs. We believe they give us longer mileage per dollar expended."

PHILIP HEMINGWAY, President,
Hemingway Bros. Interstate
Trucking Co.

"MAYFLOWER SAILS THE CONTINENT ON FIRESTONE TIRES"



"We equip Mayflower units with Firestone tires for two reasons: (1) Our records show long dependable mileage from Firestone tires. (2) Service facilities and cooperation of Firestone Dealers and Stores are available in every corner of the continent."

JOHN SLOAN SMITH,
V. P. and Gen. Mgr.
Aero Mayflower Transit Co.

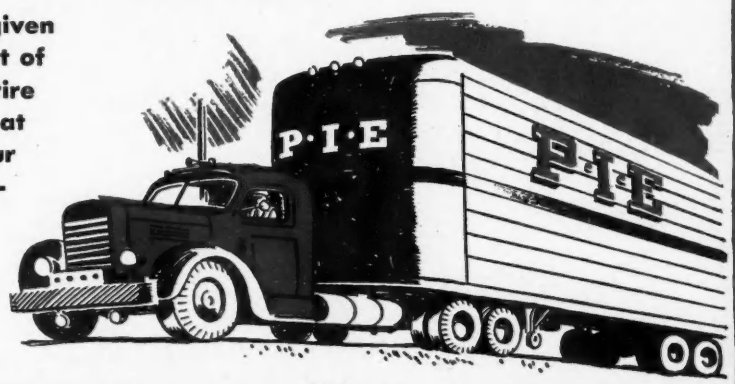
the Story

on *Your* Trucks will MILES PER DOLLAR

"THE RED BALL FREIGHT ROLLS ON FIRESTONE"

"Firestone tires are given preference on our fleet of over 400 units. Our tire mileage records show that Firestone tires serve our needs to the best advantage."

C. EUGENE JOHNSON,
V. P. and Gen. Mgr.
Pacific Intermountain Express Co.





"FIRESTONE TIRES GIVE US EXTRA MILEAGE"



"Tires constitute an important part of our normal operating expenses. Our mileage records show that Firestone tires give us *extra* mileage per dollar spent."

ED J. BUHNER, President Silver Fleet Motor Express.

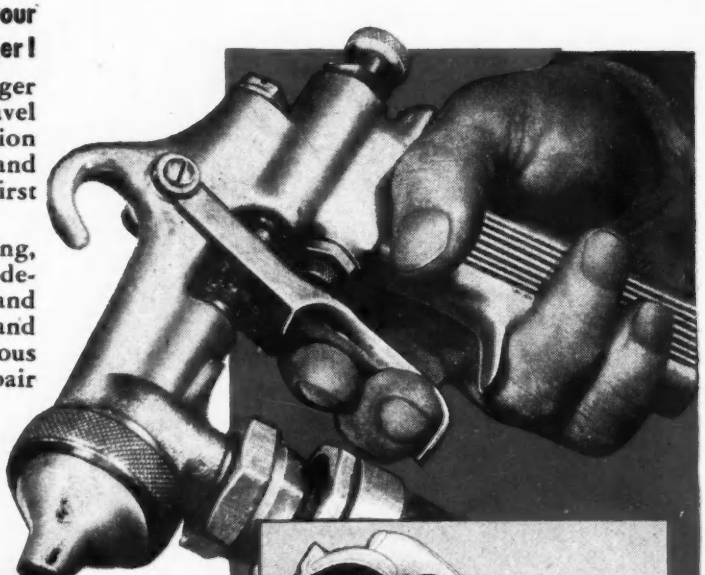
GO GUNNING FOR LOWER FLEET REPAIR COSTS . . . .

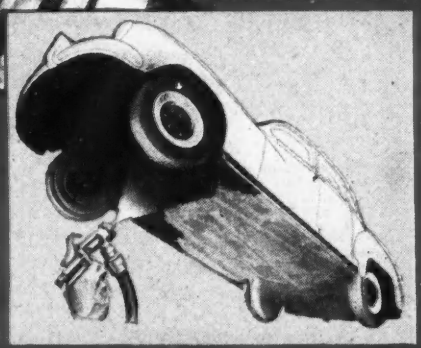
"UNDERSEAL" protects the "danger zone" . . . keeps your fleet units out of the shop and on the road longer!

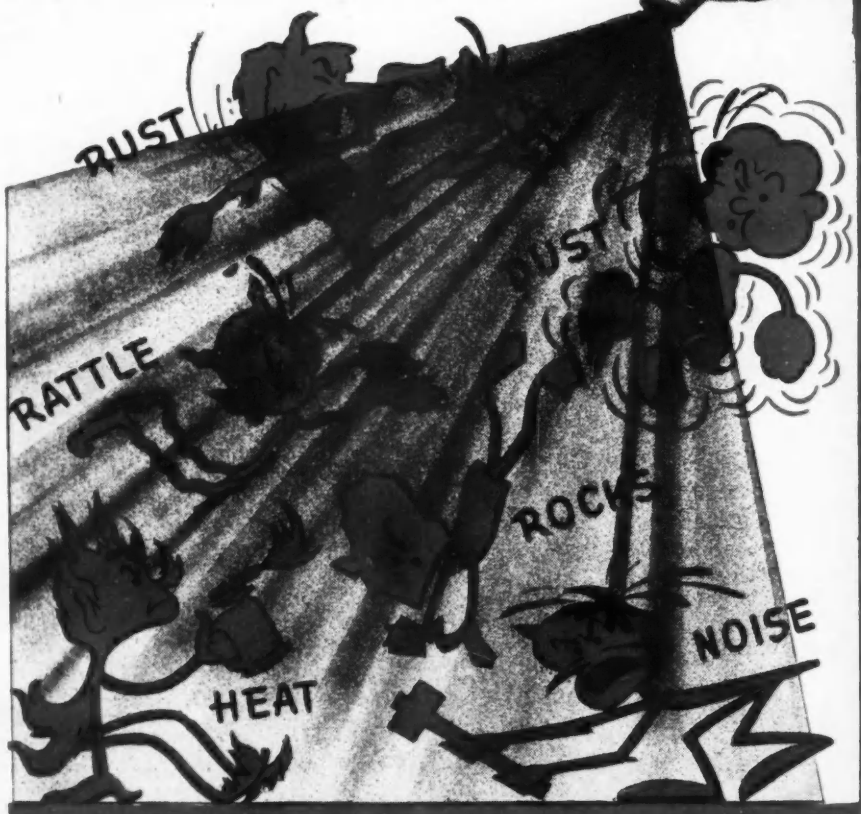
Every unit in your fleet has one unprotected "danger zone." It's down underneath where flying rocks and gravel grind away at under parts . . . where rust and corrosion rot through fenders and body . . . where squeaks and rattles start . . . where a truck, bus or taxi shows its first signs of wear.

"UNDERSEAL," the new rubberized protective coating, protects your vehicles against that mile-after-mile destruction. It repels rocks and gravel—muffles motor and body vibration—protects under-surfaces from rust and corrosion—insulates against cold, dust, heat, dangerous exhaust fumes—and it keeps vehicles out of the repair shop longer. And it's guaranteed to protect for the life of the vehicle.

Give your fleet this sure, guaranteed protection now. Watch repair costs drop. Write today for full details on how to set up "UNDERSEAL" Protective Coating service in your repair shop.







"UNDERSEAL" Protective Coating is easy to apply—takes no skilled labor, no extra space. Standard equipment for applying is now on the market.

Made in U. S. A. by

MINNESOTA MINING & MFG. CO.

THE 3M COMPANY

ADHESIVES AND COATINGS DIVISION,
411 PIQUETTE AVENUE, DETROIT 2, MICHIGAN

General Offices: St. Paul 6, Minn.

"UNDERSEAL" Protective Coating comes in 5 gallon cans and 44 or 55 gallon drums ready to use.



TRADEMARK

UNDERSEAL

BRAND

RUBBERIZED

PROTECTIVE COATING

ANOTHER 3M PRODUCT

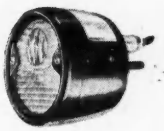
Sell Safety with GROTE

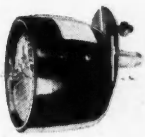
- Reflectors
- Lamps
- Flares

I.C.C. authorized. NO FUEL OR BULB FAILURE — NO BATTERY FAILURE — NO CROWNED ROAD WOBBLE —STANDS ON LEGS—VISIBLE ½ mile in both directions—Sealed in Plexiglas shatterproof reflectors — ELIMINATES MAINTENANCE.









Universal Type Stop and Tail Light — #215-U — Powerful GROTELITE Reflex lens. Adapter bracket for Universal installation. Illuminating License lens clear molded plastic. Black enamel finish.

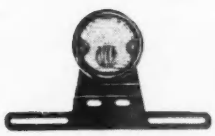
Stop and Tail Light — #215 — Perfect replacement for 2″ bolt center spacing. Ideal for original equipment. GROTELITE Reflex LENS.

Streamline Marker or Fender Lights — #205 — Rubber mounting pad for Universal fit on flat, medium or deep curved surfaces. Red, Amber or Clear one piece Plexiglas lens.





Armored Clearance Lights — #200 — Extra heavy ⅛″ steel housing, special aluminum finish, and shatterproof Plexiglas lens. Visibility far exceeds requirements.



Combination Stop and Tail Light and License Bracket — #215-L — Heavy steel license plate holder spot welded to #215 housing. Installation adjustable to varying bolt centers.



Grote Sealed Beam Fog Lights — A 1947 design. The last word in appearance, construction and workmanship. Heavy Chromium finish. Sturdy Mounting brackets. No. 4015 Mazda Sealed Beam units.

GROTE REFLECTORS are not glass!

Made of shatterproof Plexiglas, the clearest and hardest plastic material known. Reflectivity surpasses by far all State, I.C.C. and S.A.E. photometric requirements.

Heavy steel housing. Attractive aluminum enamel. Red or Amber Plexiglas lens. 3 models — #0-100 oval 3″ dia. lens; #R-100 3″ dia. lens, round, 2 hole; #104 4″ dia. lens, round, 4 hole.

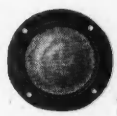
O-100



R-100



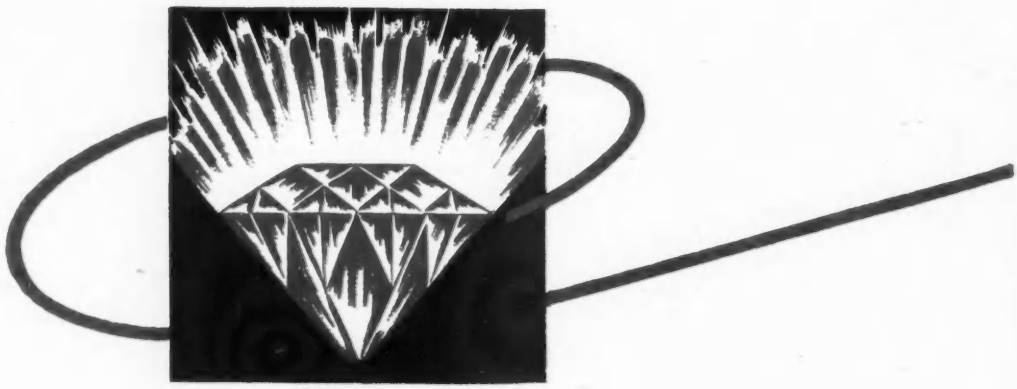
#-104



Buy with confidence the Grote *Safety Line!* Modern in design—with finishes that last through *all weather*. Sturdy-built Construction that can "take it". Specify Grote to your Jobber!

for SAFETY
REFLECTORS • LAMPS • FLARES
GROTE
GROTE Manufacturing Company, Inc. Bellevue, Ky.
Automotive Sales Office: Moorestown, N. J.

"It's the jewel that makes the ring . . ."



ONLY WAUSAU *Oil-savr* PISTON RINGS HAVE SAFETY CENTER UNITS*

That's why OIL-SAVRS are a performance sensation . . . why they're revolutionizing the ring industry with these remarkable features:

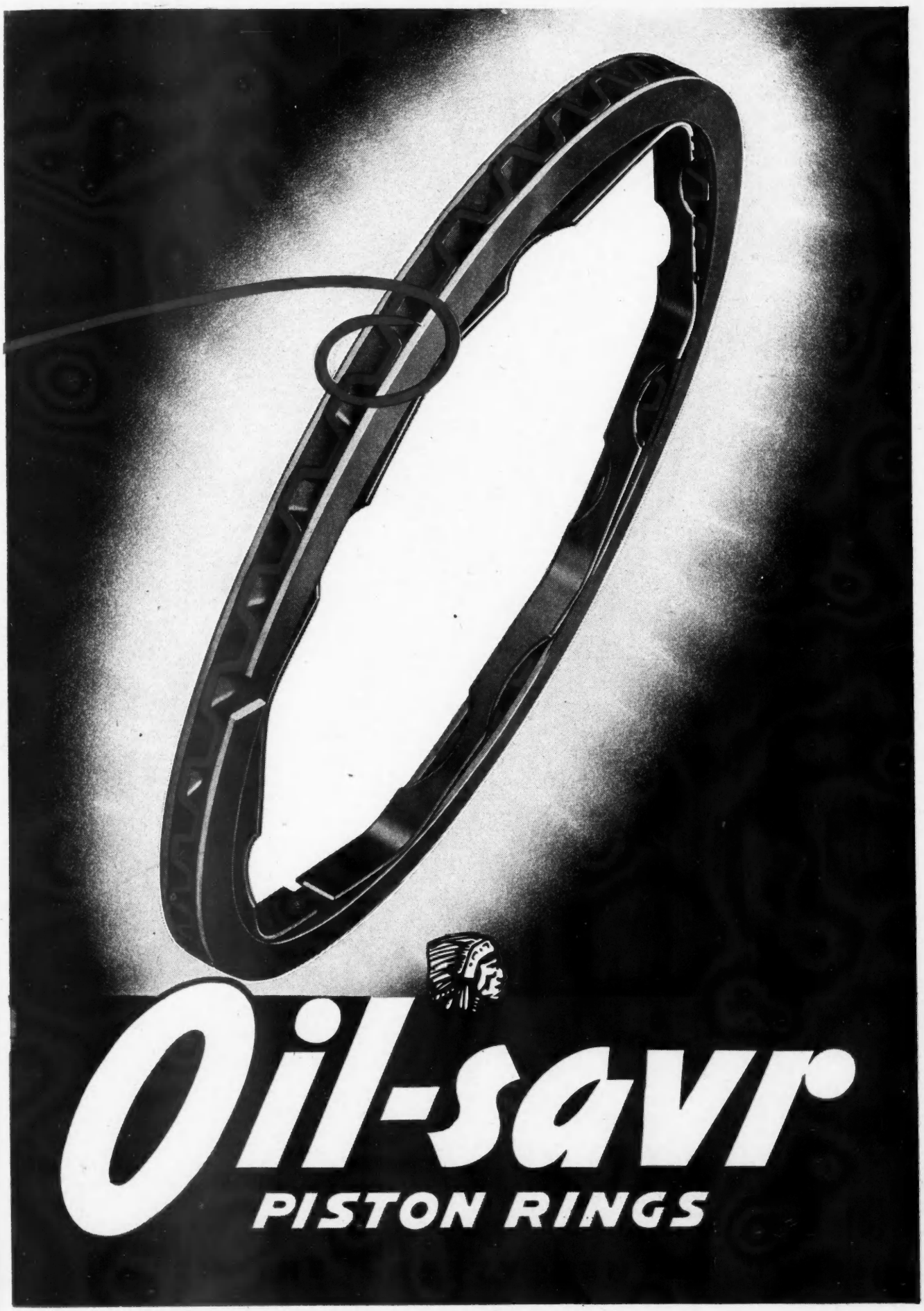
Clean . . OIL-SAVRS don't carbonize.
Lively . . OIL-SAVRS perform immediately.
Safe . . OIL-SAVRS won't break — won't score.
Lasting . . Long past the usual clogging point of ordinary rings, OIL-SAVRS control oil amazingly, produce the peppiest kind of power.

WAUSAU OIL-SAVR installations will set new economy and performance records in your vehicles . . new re-ring maintenance standards in your shop. Available in "Custom Made" sets for cars, trucks and tractors . . for every re-ring and rebore requirement. Ask your jobber or write,

WAUSAU MOTOR PARTS CO., 2400 Harrison St., Wausau, Wis.

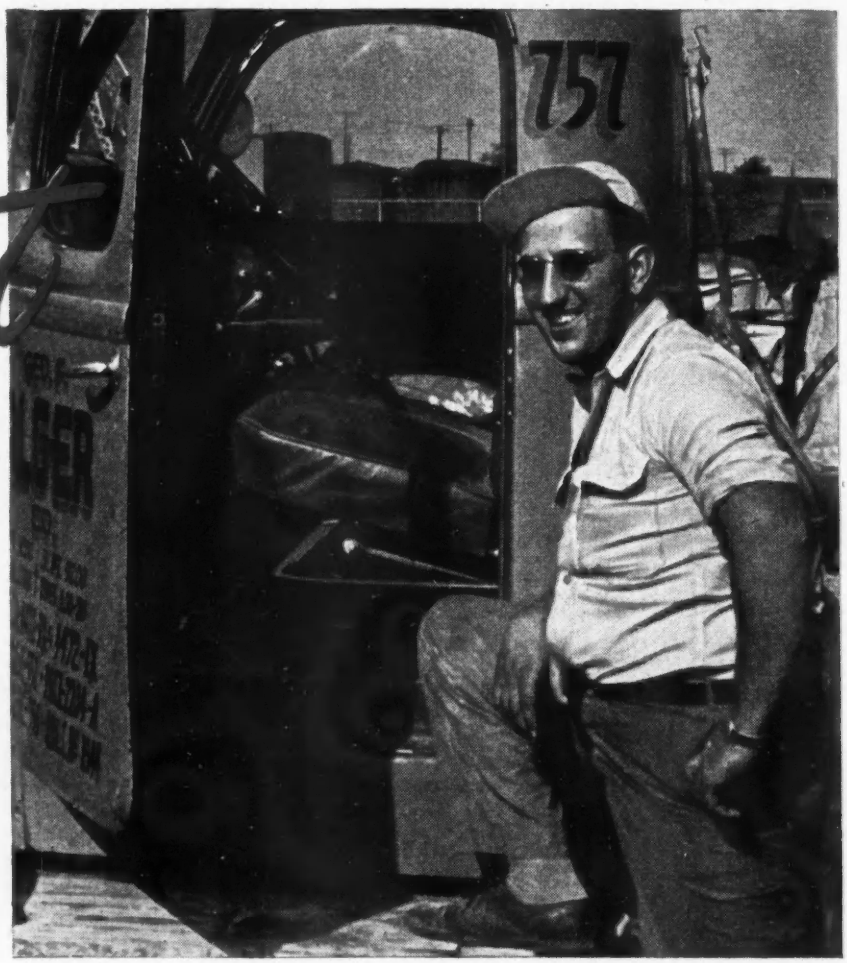
* U. S. PATENT No. 2323815

Wausau


Oil-savr
PISTON RINGS

Comfort

WHERE COMFORT REALLY COUNTS



Bill Fountaine, right, Detroit, Michigan truck driver says of the new Monroe Truck Seat: "A great relief on long hauls. I drove 460 miles in one day, and had four hours sleep and made another run of 250 miles. The seat is a great thing for the driver, and I'd recommend it to any truck owner."

MONROE *HYDRAULIC* E-Z RIDE TRUCK SEAT

The truck driver need no longer be "the forgotten man of the highway". For Monroe remembered the jars and jolts he has long had to take from truck springs, necessarily built strong enough to carry heavy pay loads, but too strong for human comfort. Already widely known for building comfort into other types of wheeled vehicles, Monroe came up with an answer that settles the big problem once and for all!

That answer is the Monroe *Hydraulic* E-Z RIDE TRUCK SEAT—built to carry the driver and no other load—yes, with comfort built right in! The easily installed Monroe Seat combines soft spring comfort with the ride-cushioning of the Monroe Direct-Double-Action *Hydraulic* Shock Absorber and the side-sway control of a lateral stabilizer. It adds miles to the run—dollars to the pocketbooks of fleet owners—besides driver ease and better health. That's comfort where comfort really counts!

Now available for Dodge, International, GMC, Ford and Chevrolet Trucks. Write or wire.



MONROE E-Z RIDE TRUCK SEAT

1. Special Monroe Direct-Double-Action *Hydraulic* Shock Absorber controls jars and jolts.
2. Exclusive *variable-rate* coil spring acting in unit with Monroe *Hydraulic* Shock Absorber assures easy-chair comfort for driver of any weight. No adjustment required.
3. Pivot point and stabilizer bar take care of side sway—just as important to health and endurance as cushioning the up-and-down jolts.
4. Easily installed!

MONROE
MONROE AUTO EQUIPMENT CO., MONROE, MICH.

Originated and manufactured exclusively by

MONROE AUTO EQUIPMENT CO., MONROE, MICH.



TAKE A TIP FROM ONE WHO SPEAKS FROM EXPERIENCE

For Better Brakes..

REPAIR

with WAGNER LOCKHEED HYDRAULIC BRAKE PARTS



You'll find it pays to use genuine Wagner Lockheed Hydraulic Brake Parts. As a pioneer in hydraulic brakes, and as manufacturer of Lockheed Hydraulic Brakes for original equipment, Wagner *knows* what qualities are required in replacement parts.

All these qualities . . . perfect fit . . . dependable performance . . . known acceptance . . . are available in Wagner parts in factory-sealed kits or as individual parts. Cylinders are available completely assembled or as individual parts.

Wagner Lockheed No. 21 Brake Fluid is an all-season fluid that functions perfectly under all atmospheric temperatures. Used by car and truck manufacturers and recommended for all hydraulic brakes.

For details, consult your nearest Wagner jobber, or write us.

Wagner Electric Corporation
6470 PLYMOUTH AVE., ST. LOUIS 14, MO., U. S. A.

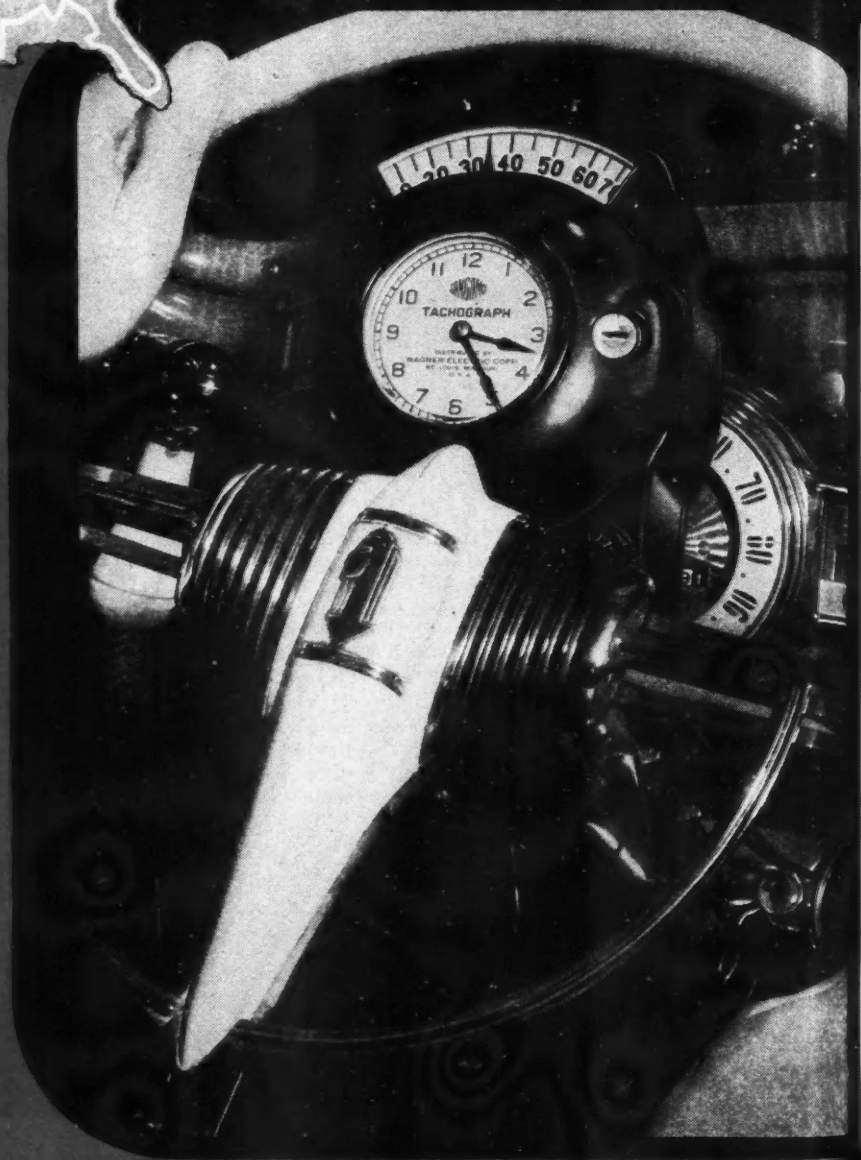


LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • NoRol
CoMoX BRAKE LINING • AIR BRAKES • TACHOGRAPHS
ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES

H47-3

A A A TEST VALUE





The Tachograph illustrated at right is one of the identical units installed on the test cars used in the AAA tour. Through the use of these efficient recording instruments, complete, up-to-the-minute operating data was instantly available to test officials for analyzing all stages of wear on various synthetic tires and tubes, as well as "recaps" used during the tour.

Map diagram above illustrates the routing of the official AAA "Keep 'Em Rolling" tour. 20,000 Tachograph-supervised miles were recorded in practically every state plus 5,000 additional miles at the Indianapolis Speedway. Maintenance and operating costs for the Tachograph units were nil.

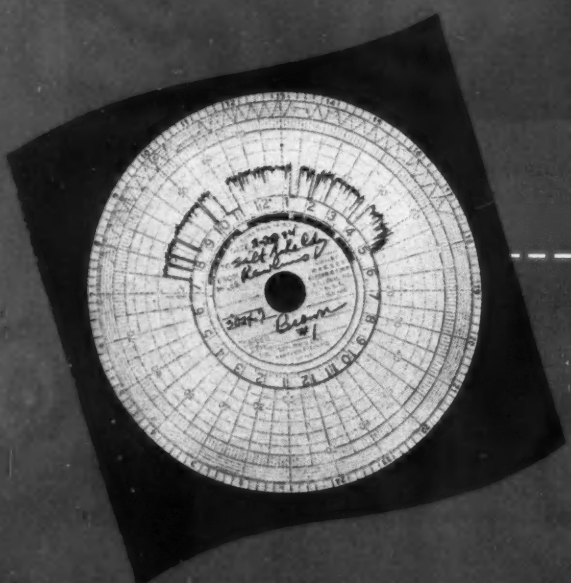


Chart Tells All!

WAS TIME LOST?
WAS SPEED LIMIT EXCEEDED?
WAS GASOLINE WASTED?

At the left is an unretouched photograph of one of the many Tachograph charts recorded on the AAA test. Here, then, is a permanent, easy-to-read record of facts, available for reference at any time.

TOUR PROVES OF TACHOGRAPH

Now...Available Again for all Commercial Vehicles

During the war, the American Automobile Association sponsored an exhaustive test to determine the mileage possibilities of synthetic tires, tubes and recaps.

In order to obtain complete, *accurate* facts and figures from which a scientific analysis could be compiled, a Tachograph was installed on each of the test cars.

These Tachographs automatically *recorded* on a simple card chart which fits into the instrument, all data, including traveling speeds, starting and stopping time, miles traveled between schedule points, etc.

When the results of this test were made public the traveling speed was immediately questioned. Tachograph card charts were produced and proved beyond doubt that at no time did these test cars exceed the 35 mile per hour war-time speed limit.

Now Mr. Fleet Owner... what has this test tour to do with your operating and maintenance problems? The conclusions are obvious, for here is a proved method of eliminating guess work from the job of finding out exactly what happens to every vehicle in your fleet, day-in—day-out. Net results mean far greater safety and savings that will pay for the Tachographs in a short while.

These practical, tamper-proof recording speedometers, which have proved their value over the past 5 years in actual use on thousands of commercial vehicles, are again available for immediate delivery.

They are manufactured by Sangamo Electric Company and distributed exclusively by the Wagner Electric Corporation and are fully guaranteed.



Free Illustrated Bulletin SU-3A

Every fleet owner and truck operator should have a copy of this valuable 12-page booklet. Your copy is ready. *Clip the coupon and mail TODAY!*

WAGNER ELECTRIC CORPORATION
6476 PLYMOUTH AVE., ST. LOUIS 14, MO., U. S. A.

Please send my Free copy of Bulletin SU-3A.

Name and Position_____

Company_____

Address_____

City_____

We Operate_____ vehicles_____



Air Brake KITS... for QUICK--EASY Installation!

The ingenuity of Wagner brake engineers has made it possible for operators of trucks, tractors, trailers, and buses to get the greater advantages and safety afforded by air brakes.

The outstanding Wagner Air Brake System is now available in complete kits including all parts, connections, and brackets, as well as complete instructions so that quick, easy installation can be made right in the field.

Install a Wagner Air Brake System on every vehicle in your fleet. They will give you outstanding economy, not only in lower brake maintenance, but also in increased safety.

Remember the Wagner Air Brake System is the only air brake system with the famous Wagner Rotary Air Compressor. A few points of superiority are listed:

Rotary motion of all moving parts.

In running balance at all times.

Longer belt life due to more uniform torque loading.

Low friction losses—therefore high operating efficiency.

A predetermined air pressure range automatically maintained.

Operating parts are lightly stressed, thereby insuring long life and low maintenance cost.

Extremely quiet in operation.

Self-contained oiling system—uncontaminated by engine waste products.

Compact—requires minimum installation space.

Low operating temperatures prevent carbon formation in the delivery lines.

Adaptable to all types of automotive brake systems.

For complete description, write for **BULLETIN KU-50B** and address your request to Wagner Electric Corporation, 6470 Plymouth Avenue, St. Louis 14, Mo.

Wagner Electric Corporation EST. 1891

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID · NoRol CoMoX BRAKE LINING · AIR BRAKES · TACHOGRAPHS ELECTRIC MOTORS · TRANSFORMERS · INDUSTRIAL BRAKES

The System With The Rotary Compressor

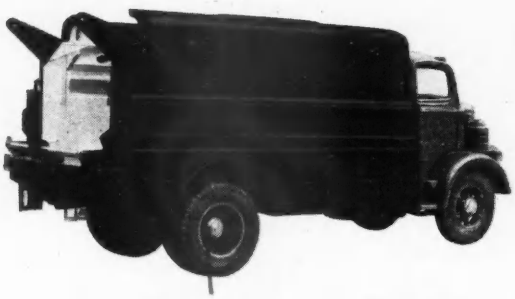
K47-2



When is a special Truck Body STANDARD?



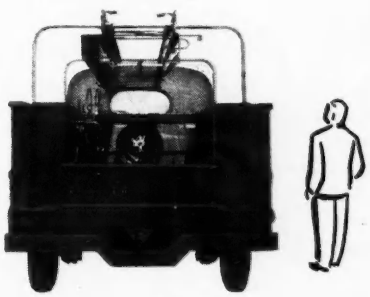
An American line construction body represents a cross section of the needs of utilities. We incorporate the experience of many, many users, supplemented by our own observations and field studies. As a result, American DPL, B-4, 4551, 4460-L, and other line construction bodies have become standard with utilities.

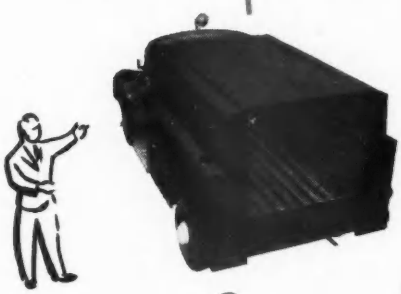


Proper design aids this production standardization. Standard parts and assemblies facilitate mass production . . . they permit easy maintenance. Gadgets and trick features purposely have been left out. Yet American bodies have a place for everything needed on the job.



Consider the American DPL Line Construction Body. This design has 17 specific construction features, many standard units (such as derrick tunnel) and choice of more than 60 optional equipment items.





Standardization helps you keep your operating costs low. The American Coach and Body Company, largest manufacturers of utility truck bodies, will continue the intelligent application of efficient standardization.

THE *American* COACH and BODY COMPANY

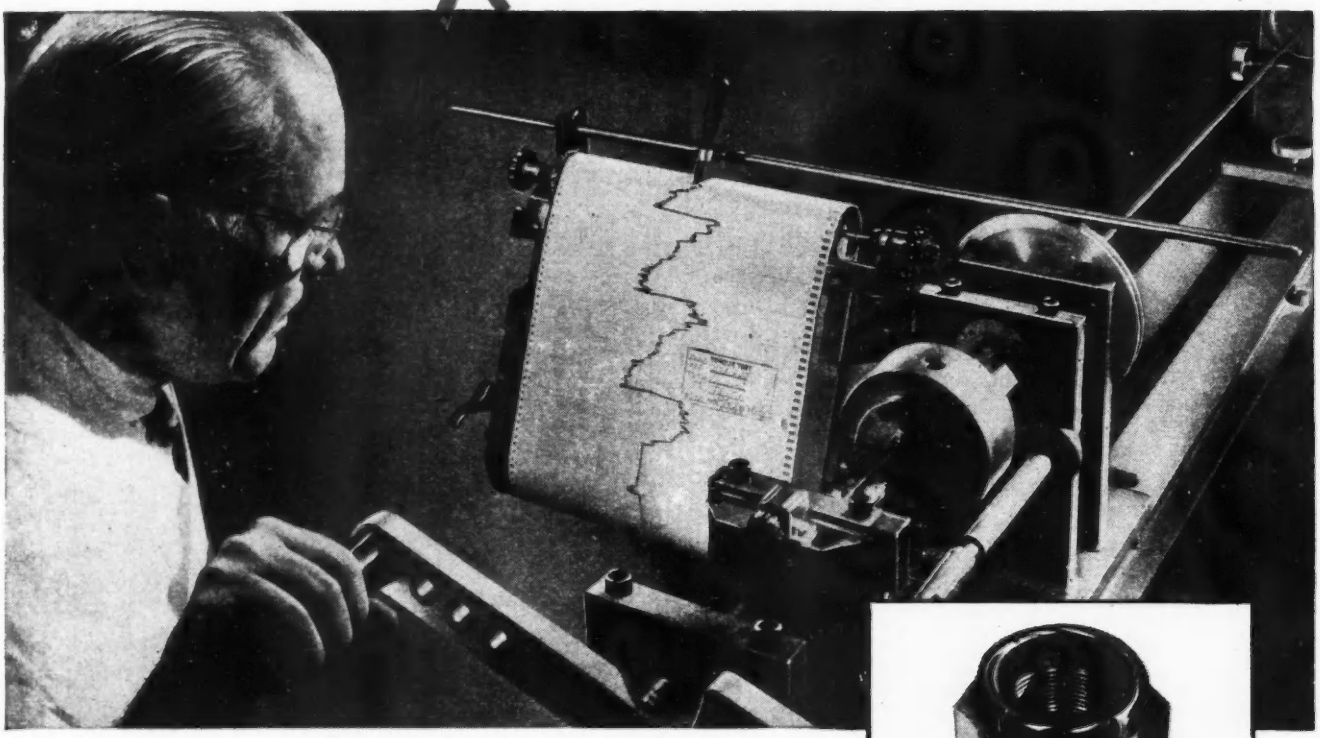
9503 WOODLAND AVE., CLEVELAND 4, OHIO

SALES and ASSEMBLY THE AMERICAN COACH AND BODY CO OF CALIF., 432 FIFTH ST., OAKLAND 7, CALIF.
BAKER EQUIPMENT ENGINEERING CO., SUMMIT & NORFOLK STS., RICHMOND 11, VA.

OFFICES 350 MADISON AVE., NEW YORK 17, N. Y. INSURANCE EXCHANGE BLDG., DES MOINES 9, IOWA

ACB and

A-N TORQUE TESTS *Prove Reusability* OF ELASTIC STOP NUTS



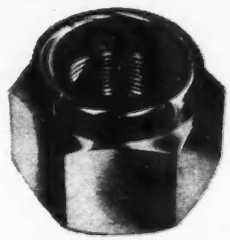
—the Red Elastic Collar provides dependable locking torque for RE-USE!

Army and Navy specifications for aircraft lock nuts include a specific torque test to prove locking effectiveness. Lock nuts have to maintain adequate locking torque through 15 on-and-off cycles.

ESNA Elastic Stop Nuts—with the Red Elastic Collar that has become a symbol of security to all aviation engineers—remain self-locking against Vibration, Impact and Stress Reversal in both pre-stressed and positioned settings.

In addition, the self-locking, self-sealing and reusable Red Elastic Collar protects the bolt. It does not deform the bolt, damage the threads or gall the finish.

Reusable ESNA Elastic Stop Nuts provide dependable protection against Vibration, Thread Corrosion, Thread Failure, and Liquid Seepage. This multiple protection—which has made Elastic Stop Nuts the standard fastener on many products—also achieves the double economy of inventory simplification and reduced procurement costs. ESNA engineers are now ready to study your fastener problems. Address: Elastic Stop Nut Corporation of America, Union, New Jersey. Sales Engineers and Distributors are conveniently located in many principal cities.



The RED ELASTIC COLLAR

— denoting an ESNA product —

. . . is threadless and dependably elastic. Every bolt—*regardless of commercial tolerances*—impresses (does not cut) its full thread contact in the Red Elastic Collar to fully grip the bolt threads. In addition, this threading action properly seats the metal threads—and eliminates all axial play between bolt and nut threads.

Torque tests—for Elastic Stop Nuts—are based on a steel-to-steel frictional coefficient of .18. Bolt loadings are figured at 40,000 psi for commercial bolts; 90,000 psi for aircraft bolts.



ELASTIC STOP NUTS


INTERNAL WRENCHING


ANCHOR


WING

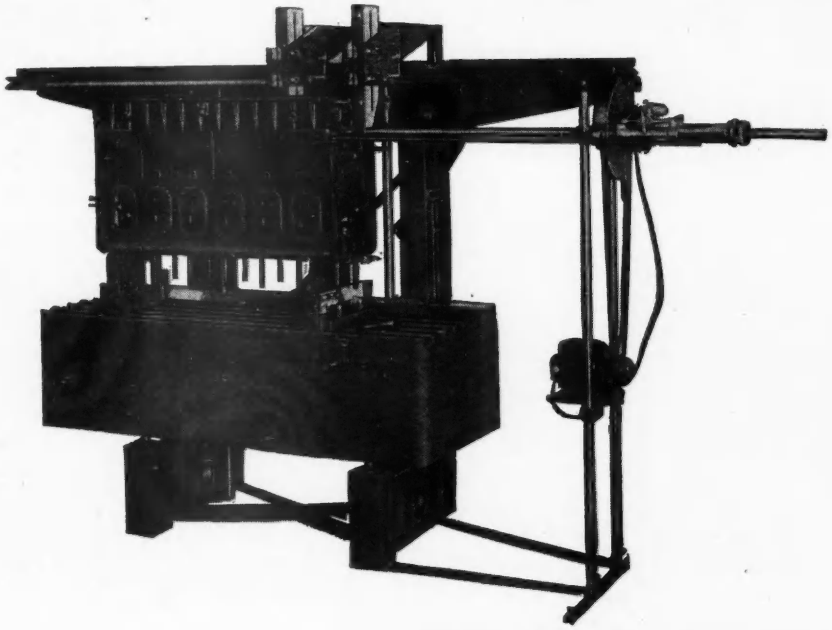

SPLINE


CLINCH


GANG CHANNEL


CAP

***PRODUCTS OF:* ELASTIC STOP NUT CORPORATION OF AMERICA**



NEW DESIGNS

with indicators, arms and adjustable parallels that assure

More Speed – Capacity – Accurate Centering

Designed for align boring main and camshaft bearings of all engines with bearings 1 3/16″ to 5 ¼″. Enables you to recondition your motors, easier, better and quicker. Get the most out of your motors—recondition them the TOBIN-ARP way with ease and simplicity.



TOBIN-ARP ALIGN BORING MACHINES

Equipped with motor drive and hydraulic feed. Assures perfect alignment to every engine bored.

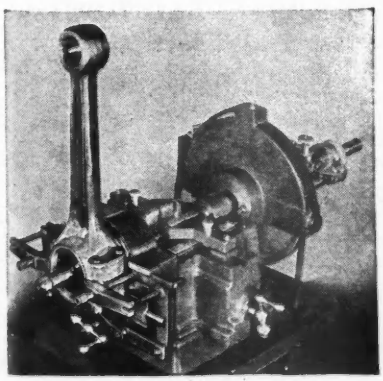
Model TA – 15 has maximum overall bearing spread of 96 inches.

Model TA – 14 has maximum overall bearing spread of 76 inches.

TOBIN-ARP SHELL BEARING BORING MACHINE

This compact unit (center) will handle all shell bearings. Bores individual bearing shells to any predetermined size, also resizes eccentric bearings. Handles undersized and special sized bearings. Provides a mirror finish in less than two minutes.

TOBIN-ARP ROD BORING ATTACHMENT (bottom)



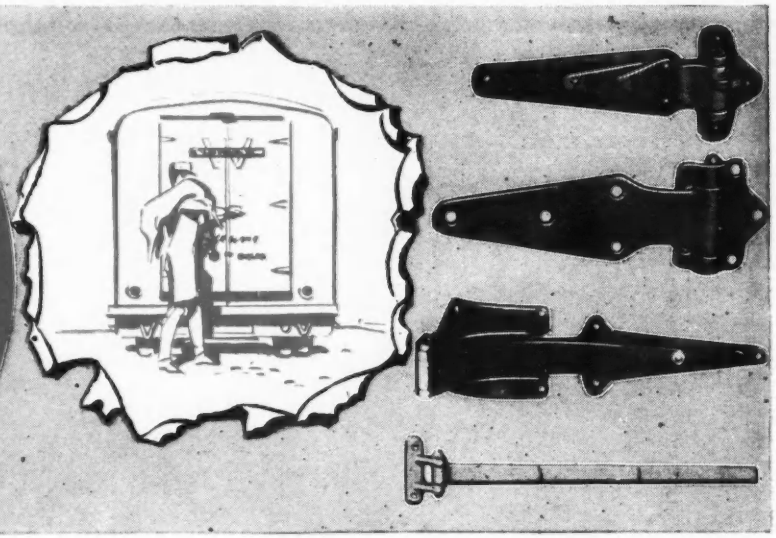
Designed to fit our Shell Bearing Boring Machine and bores semi-finished babbitted rods, inserts in the rod and the rod forging itself. It's compact, fast, accurate and convenient to use. Handles all rods up to and including RD 8 Caterpillar Diesel. Unequalled for resizing V8 Ford Rods quickly.

Write for complete details on any one or all three of these units.

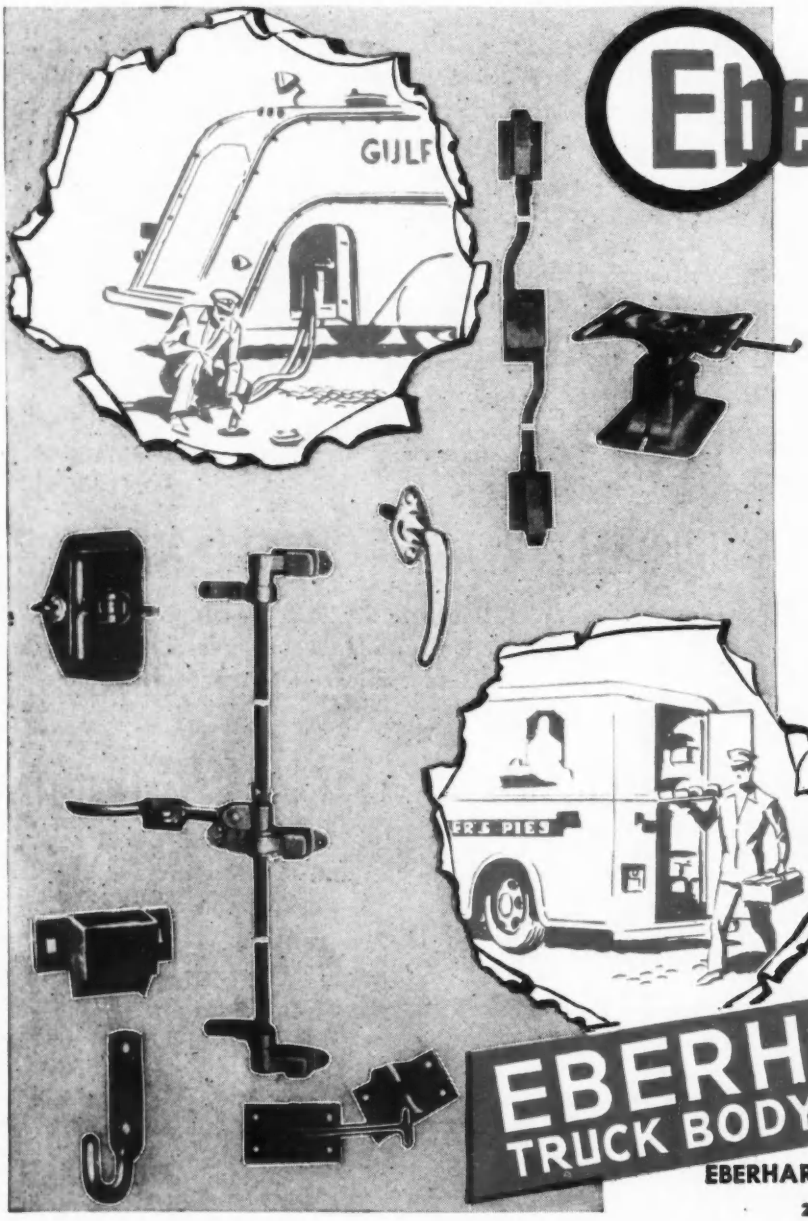
TOBIN-ARP MFG. CO.

2845 Harriet Ave. S. **Minneapolis 8, Minn.**

To the BUTCHER, THE BAKER, *from the* TRUCK BODY MAKER



. . COMES LONG RUN AUTOMOTIVE



EberHARDWARE

For years, the flow of "EberHARDWARE Equipped" truck bodies from Builder to Butcher and Baker—to ALL USERS, has indicated the discriminating choice of the "Purpose Tested", extensive Eberhard line.

Continually in close contact with the needs of users as well as builders, Eberhard engineers have pioneered many new items and modified established products to meet changing requirements.

Everywhere, on all highways, Circle (E) Eberhard truck body fittings are at work as door locks that protect cargoes, hinges that swing all types of doors and handles that facilitate easy entrance to compartments.

You can turn to EberHARDWARE for every need with assurance and satisfaction.

EBERHARD *Long Run*
TRUCK BODY FITTINGS

E

EBERHARD MANUFACTURING CO.
2734 TENNYSON ROAD CLEVELAND, OHIO

FOR UTMOST RELIABILITY IN THE HEART OF THE FUEL SYSTEM



AVAILABLE FROM THE AC WHOLESALER

Your AC Fuel Pumps give you such dependable service and long life because *highest quality is built in,* from blueprints to finished products. There is one sure way to protect that reliability and durability,—insist upon AC pumps and parts.

FOR REPLACEMENT—install new AC Fuel Pumps or Authorized Factory-Rebuilt AC Fuel Pumps.

FOR REPAIRS—use AC Diaphragm or Parts Kits.

QUALITY FEATURES

- **Careful control of pressure and flow assuring correct fuel supply.**
- **Accurate hardening, precision machining of parts essential to long life.**
- **Accurate control of spring tensions and temper.**
- **High, and controlled, pin hardness.**
- **4-layer, patented-impregnation diaphragms of special airplane cloth.**
- **Carefully finished rocker arm pads, located to center on cam.**
- **Split-hair rocker arm clearance and control of pad hardness.**
- **Uniform pull rod hardness at pin holes.**

AC

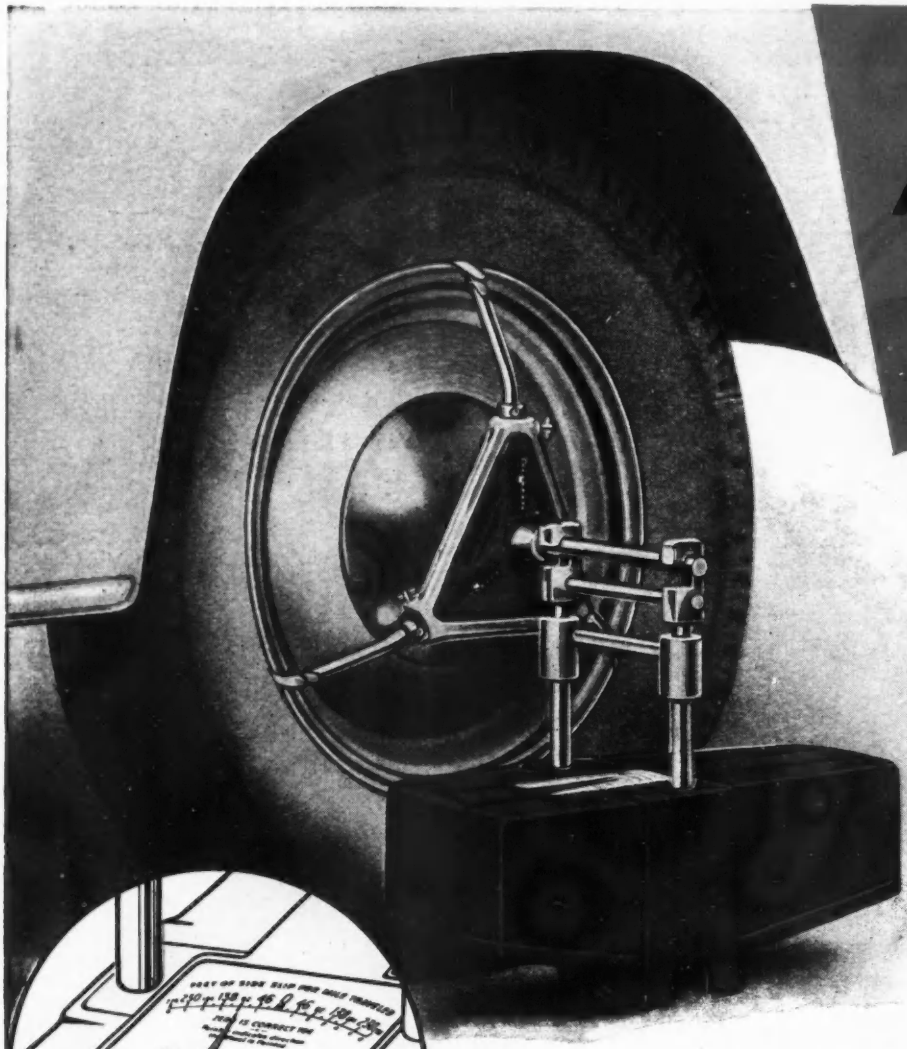
FUEL PUMPS

SEND FOR AC SHOP MANUALS

Field Service Department, AC Spark Plug Division, G.M. Corporation
910 Mott Foundation Building, Flint 3, Michigan
Gentlemen: Please send at once, no charge, the AC Shop Manuals checked:

☐ How to Service Spark Plugs ☐ HOW TO SERVICE FUEL PUMPS
☐ How to Service Spark Plug Cleaner ☐ How to Service Air Cleaners
☐ How to Service Oil Filters ☐ How to Service Speedometers
☐ How to Service Ammeters and other Instruments CCJ-4

NAME_____
FIRM_____
STREET ADDRESS_____
CITY_____ STATE_____

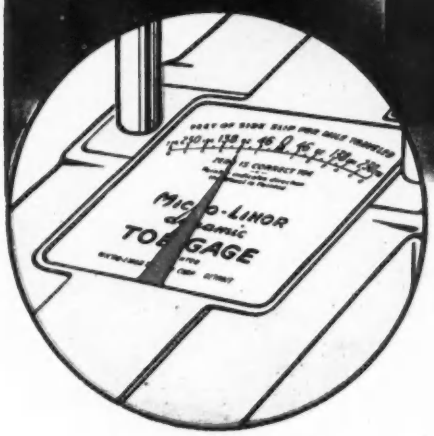


TEST WHEEL ALIGNMENT UNDER LOAD!

FITS ALL CARS TRUCKS AND TRAILERS —ALSO AIRPLANES

•

Accuracy Not Affected by Wheel Camber



Dial Easily Read 10 Feet Away

•

Patented

MODEL WR-1

MICRO-LINOR *dynamic* TOE GAGE

The most simple wheel alignment instrument ever developed.
Snaps on instantly. Checks all four wheels in less than 5 minutes.
Tests front wheels, rear wheels, trailer wheels. Fits all cars, trucks, trailers and airplanes.

Increases the scope of wheel alignment analysis beyond anything that was ever before possible.
Reveals on its dial the side-slip of each individual wheel in feet per mile.
Offers new standards in accuracy and simplicity.

CHECKS OPERATING ALIGNMENT

•

Shows Feet of Scuff Per Mile on Tires

No Training Required to Operate It

MICRO-LINOR SERVICE CORPORATION

1627 W. FORT ST. DETROIT 16, MICH.

COSTS LESS THAN A SET OF TIRES



Quick Starts . . . Long Life

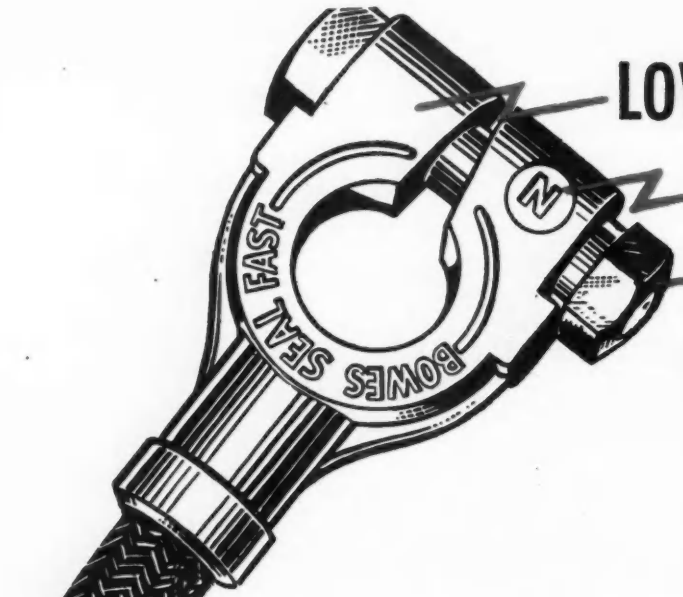
WILLARD BATTERIES — Automobile Truck and Bus • Radio • Motorcycle Tractor • Aircraft • Marine • Diesel Stationary — Sold and serviced by Willard Dealers everywhere.

"SAFETY-FILL" COMMERCIAL AND DIESEL BATTERIES

Willard

Dependability • Performance • Long Life

WILLARD STORAGE BATTERY CO. • CLEVELAND • LOS ANGELES • DALLAS • TORONTO



LOWER MAINTENANCE COST
TROUBLE-FREE SERVICE
LONGER CABLE LIFE
WITH BOWES SEAL FAST

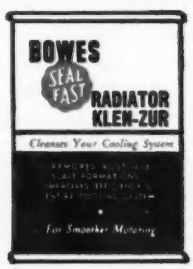
CORRODELESS TERMINALS!

• It's at the *terminal* that most battery trouble occurs . . . sapping battery life, kicking up your maintenance costs. Bowes "Seal Fast" CORRODELESS Terminals are *unconditionally guaranteed* against corrosion—any Bowes "Seal Fast" Battery Cable will be replaced free if the terminal corrodes under sulphuric acid conditions. Here's the easy, inexpensive way to stop battery trouble *before* it starts. The Bowes "Seal Fast" distributor will gladly train your men in the proper adjustment of these better battery cables, and in the use of other Bowes "Seal Fast" products.

BOWES SEAL FAST

PREPARE YOUR RADIATORS FOR SPRING!

Bowes "Seal Fast" Radiator Klen-Zur flushes your engines quickly and thoroughly, removing winter's accumulation. Then follow this with Bowes "Seal Fast" Radiator Stop-Leak . . . and know that your radiators are in shape for top performance



BOWES "SEAL FAST" CORP., INDIANAPOLIS 7, INDIANA

IF YOU DELIVER PERISHABLES BY TRUCK . . .
YOU SHOULD KNOW ABOUT THE NEW

THERMO KING

MODEL "E"

MECHANICAL REFRIGERATOR





AUTOMATIC TEMPERATURE CONTROL
ONE-PIECE, FACTORY PACKAGE

Small-truck operators asked us to design a mechanical refrigeration unit for use in door-to-door and town-to-town deliveries. Our answer is the Model E. You'll find this dependable unit, like all other Thermo King models, will keep frozen foods, meats, dairy products and other perishables in perfect condition for any desired length of time. Just set the thermostat, snap the switch, and you're ready for the day's run . . . no plates to charge . . . dry ice or wet ice and salt are eliminated. Thermo King Model E is light in weight . . . easy to install . . . economical to operate. Mail coupon today for complete details.

built by

U. S. THERMO CONTROL CO.

44 SOUTH 12th ST., MINNEAPOLIS 4, MINN.

THERMO KING

LARGEST BUILDERS OF MECHANICAL TRUCK REFRIGERATION

MAIL THIS COUPON — *NOW!*

U. S. THERMO CONTROL CO. E-2-A
44 South 12th St., Minneapolis 4, Minn.

Please send complete information about Thermo King Model E mechanical refrigerator for straight trucks.

To Attention of.....

Firm Name.....

Address.....

City.....Zone....State.....

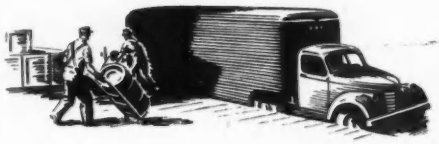
PERFORMANCE PROVED for 10 years!



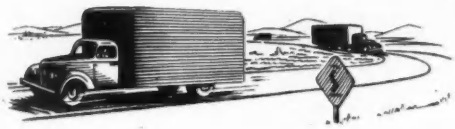
V.E.P. Oil makes engines last 50%



longer...do 50% more work between



overhauls!* No wonder it rates No. 1



with so many large fleets

*Scientific laboratory tests prove it: V.E.P. makes engines last 50% longer than they would with ordinary oil.

No question marks about V.E.P.'s performance. You'll find not only convincing laboratory proof behind V.E.P. Oil...but hundreds of millions of miles of actual road experience *over a period of ten straight years.* V.E.P. contains an *exclusive, patented* additive. There is no "similar" oil. For V.E.P. performance—insist on V.E.P. Get the facts from your local "Marathon Fleet Engineer" or write, wire or phone The Ohio Oil Company.

These V.E.P. "plusses" mean longer engine life, fewer overhauls:

- **Has 3 times the film strength of ordinary additive oils.**
- **Continuous cleansing action. Dissolves binder that holds sludge together. Frees stuck valves and rings. Prevents blow-by.**
- **Reduces carbon and varnish to minimum.**
- **Retards corrosion.**
- **Free-flowing. At low temperatures—greater "reaching" power. Non-foaming.**
- **"Magnetic-like" action prevents dry starts.**

Marathon V.E.P. 300 Series meets rigid requirements of U. S. Army Specification 2-104B and has been used by the Ordnance Department. Approved by leading equipment manufacturers as a superior All-Purpose Lubricant and Heavy-Duty Oil. One of a complete line of Marathon greases and lubricants for every fleet requirement.

THE OHIO OIL COMPANY

GENERAL OFFICES: FINDLAY, OHIO

District Offices: Robinson, Ill., Indianapolis, Ind., Louisville, Ky.

MARATHON

PRODUCERS OF PETROLEUM SINCE 1887

LOW-COST PROTECTION

for high-cost parts



Now you can say "good-bye" to worry about costly front-end damage!

Here's how to get low-cost protection for those high-cost front-end parts.

You can do so by protecting your truck with the famous Champion Grille-Guard!

Its closely spaced, all-welded bars give *full-width* protection to your truck's fenders, headlights, radiator grille, radiator and other parts costly to repair or replace. Yet the cost of a Champion Grille-Guard is even *less* than many ordinary guards.

No wonder truck owners the country over depend on the super-strength of Champion Grille-Guards for protection of front-end parts!

Guard *your* trucks with this positive low-cost protection. See your truck dealer or Truckstell distributor today. Or write The Truckstell Company, Union Commerce Building, Cleveland 14, Ohio.

6 Reasons Why Truck Owners Say Champion Grille-Guard Is the Best Buy:

1. **Protects *entire* front end**
2. **Extra strong, closely spaced bars**
3. **All-welded construction**
4. **Attractive enamel finish**
5. **Easily installed**
6. **Top quality at low price**



ONLY $22.50 FOR ½- AND ¾-TON MODELS—ONLY $25.00 FOR HEAVIER MODELS

F.O.B. Detroit, Mich.—Tax and installation extra—Special Discounts for Fleet Owners.

CHAMPION *Grille-Guards*

Approved AND DISTRIBUTED BY TRUCKSTELL

SPECIALIZED EQUIPMENT FOR PLUS PERFORMANCE

MANUFACTURED BY TURNER EQUIPMENT COMPANY, DETROIT, MICHIGAN

ANOTHER *Flare* UNSEEN SALESMAN



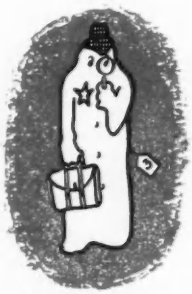
"Heavy Body" is the first salesman who proves that Flare hydraulic brake fluid is superior to any brake fluid on the market. He and his brothers combine to give you six good reasons why stocking Flare hydraulic Brake Fluid is important not only to your sales but to your *profits*. There is a Flare chemical for every automotive need.

2. HEAVY BODY ASSURES GOOD SEALING QUALITY



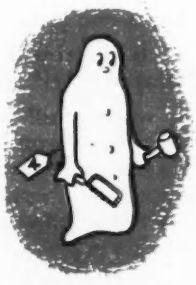
"MIXER"

1. Mixes with all standard brake fluids.



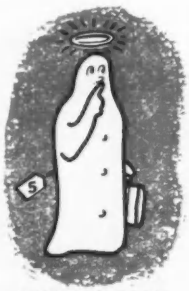
"NO LOSS"

3. No loss of hydraulic pressure.



"NO LOCK"

4. Cannot cause vapor lock.



"HARMLESS"

5. Harmless to metal parts and cups.



"FREEZIE"

6. Operates perfectly at extreme temperatures.

"For car beauty and care . . . use Flare."



THE BELL CO., INC. ESTABLISHED 1920

411 NORTH WOLCOTT AVENUE, CHICAGO 22, ILLINOIS

Single Speed . . . Two Speed & Reverse
Single Speed, Two Gear for Deep Mounting
Single Speed & Reverse
Single Speed for Cable Control
Top Mounted

Spicer

BROWN-LIPE POWER TAKE-OFFS

Encompass Every Automotive Need



SPICER MANUFACTURING Division of Dana Corporation offers a complete line of Power Take-Offs in a range of models to meet every service requirement. These Spicer Brown-Lipe Power Take-Offs are considered standard by the automotive industry, and are more widely used than any other similar type of equipment.

Spicer Brown-Lipe Power Take-Offs are designed to meet all operating conditions of continuous or intermittent service. All gears used are made from chrome nickel molybdenum steel forgings, annealed and case-hardened, insuring the longest possible service life under severe operating conditions.

Experienced Spicer engineers will be glad to help adapt Brown-Lipe Power Take-Offs to the particular requirements of your product, wherever it may need to serve.

SPICER MANUFACTURING
Division of Dana Corporation
TOLEDO 1, OHIO

43 YEARS OF Spicer SERVICE



"THINK they last longer? Mister, I KNOW

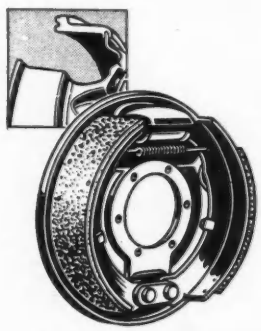
FORD TRUCKS LAST LONGER!"



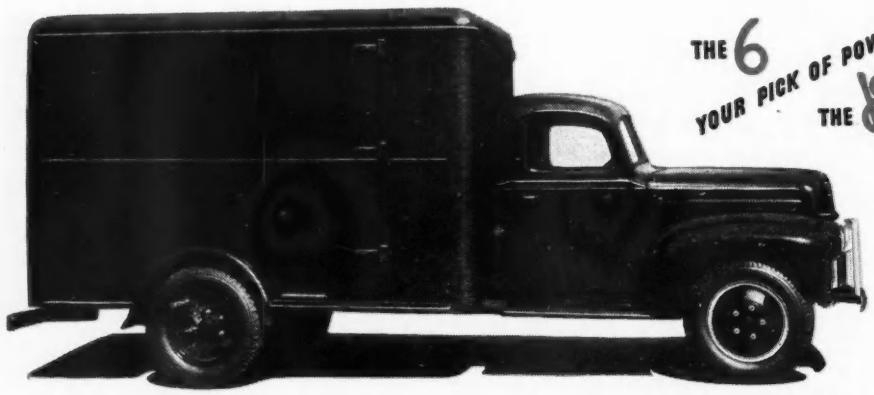
That's what Mr. R. G. Colvert of Ardmore, Oklahoma, wrote recently. "One of our Ford Trucks 11 years old," he added, "has gone over 250,000 miles and it's still on the job, with lots of good miles in it!"

ONE big reason—FORD BRAKES STAND UP!

The wide, heavy, cast drum surfaces of Ford Brakes are non-warping and score-resistant. They are interlocked and fused with steel drum discs during casting, providing great strength and reducing weight. The two shoes are independently anchored, each shoe being actuated by its own hydraulic piston. Adjustment is extremely simple and entirely external. Brakes are exceptionally stable in adjustment. Entry of water and dust is minimized by closely fitted tongue-and-groove design, where edges of drums meet backing plates. Ford brake design promotes long lining life, consistent performance, extra-safe stopping ability and easy pedal pressure.



Ford



For maximum load protection and easy maneuverability, the 158" Ford heavy duty chassis with standard Ford cab and a good closed van body is a national favorite. The Van shown is by Maday Body Works, Buffalo, N. Y.

ONLY FORD GIVES YOU *ALL* THESE LONG-LIFE FEATURES: Your pick of power—the great V-8 or the brilliant Ford Six—extra-strength frames, with siderails *doubled* in heavy duty models—new Flightlight, 4-ring, oil-saving pistons—full-floating and ¾-floating axles, with axle shafts free of weight-load . . . more than fifty such endurance-engineering features in all. It's because of this long-life construction that *of all trucks 14 years old or older on the road today, there are more Ford Trucks than all other makes combined!* More than 100 body-chassis combinations to choose from. Ask your Ford Dealer to show you!

MORE FORD TRUCKS IN USE TODAY THAN ANY OTHER MAKE!



Removes Hard Carbon
Resists Sludging
Saves Wear & Repairs

CUTS SHUTDOWN TIME



NATURALUBE D. H. D. IS GUARANTEED!

If you don't believe that D. H. D. is the best oil you have ever used, Lion Oil Company will give you your money back.

For normal service where D. H. D. is not required, use Naturalube Motor Oil (Not so heavily reinforced.)

LION PETROLEUM PRODUCTS

More Power—Lower Operating Costs

Naturalube D. H. D. is refined from a basically different crude oil. It has *natural* ability to remove hard carbon, a naturally tougher protective film and greater *natural* penetrative and adhesive properties. It is non-corrosive—safe! And in addition, it is specially reinforced to give greater resistance to the formation of sludge and lacquer.

To fleet owners, that means that D.H.D. saves wear . . . saves repairs . . . keeps engines cleaner and able to deliver maximum power. Operating costs are lower because fuel and oil consumption is lower.

Leading engine manufacturers accept D. H. D. as a superior lubricant. For complete information about Naturalube D. H. D. ask your Naturalube Distributor or write direct to Lion Oil Company, El Dorado, Ark.

LION OIL COMPANY EL DORADO, ARKANSAS

TUBE VULCANIZING...

now easier... faster... and more profitable with this modern low-cost...

INLAND

COMPLETE REPAIR UNIT



Here's a brand new approach to hot plate tube vulcanizing. It's the new, lightweight, low-cost Inland No. 7 Vulcanizing Unit . . . especially designed for speedy, easy operation.

Streamlined for action . . . with oval handles for maximum pressure with little effort . . . swinging pressure arm for quick, accurate repair set-ups . . . ready for valve stem replacements of any passenger or truck size simply by lifting tube plate from valve platen.

For only $28.85 you get complete unit: Vulcanizer and tools, plus Inland vulcanizing and reinforcing gums, cement and talc for over $200.00 worth of tube repairs. Ask your jobber salesman to show you how you can make better vulcanized repairs faster than you ever thought possible with this new Inland Unit No. 7.

Inland Rubber Corporation, Dept. C-54, Chicago 3, Illinois

See How These Features Can Speed Up Your Tube Vulcanizing

- ✔ Heats up fast—ready to vulcanize in 5 minutes.
- ✔ Complete for *both* tube and valve stems—no accessories needed for valve stem replacements.
- ✔ Pressure arm swings clear out of way to make it easy to place injured section of tube in proper position.
- ✔ Extra thick long-life rubber pad means a perfect feather-edge repair everytime.
- ✔ Tamper-proof thermostat, with special heating element, distributes heat evenly and safely over entire plate.
- ✔ Plate large enough to handle 98% of your tube repairs in one curing.

USE INLAND PRODUCTS

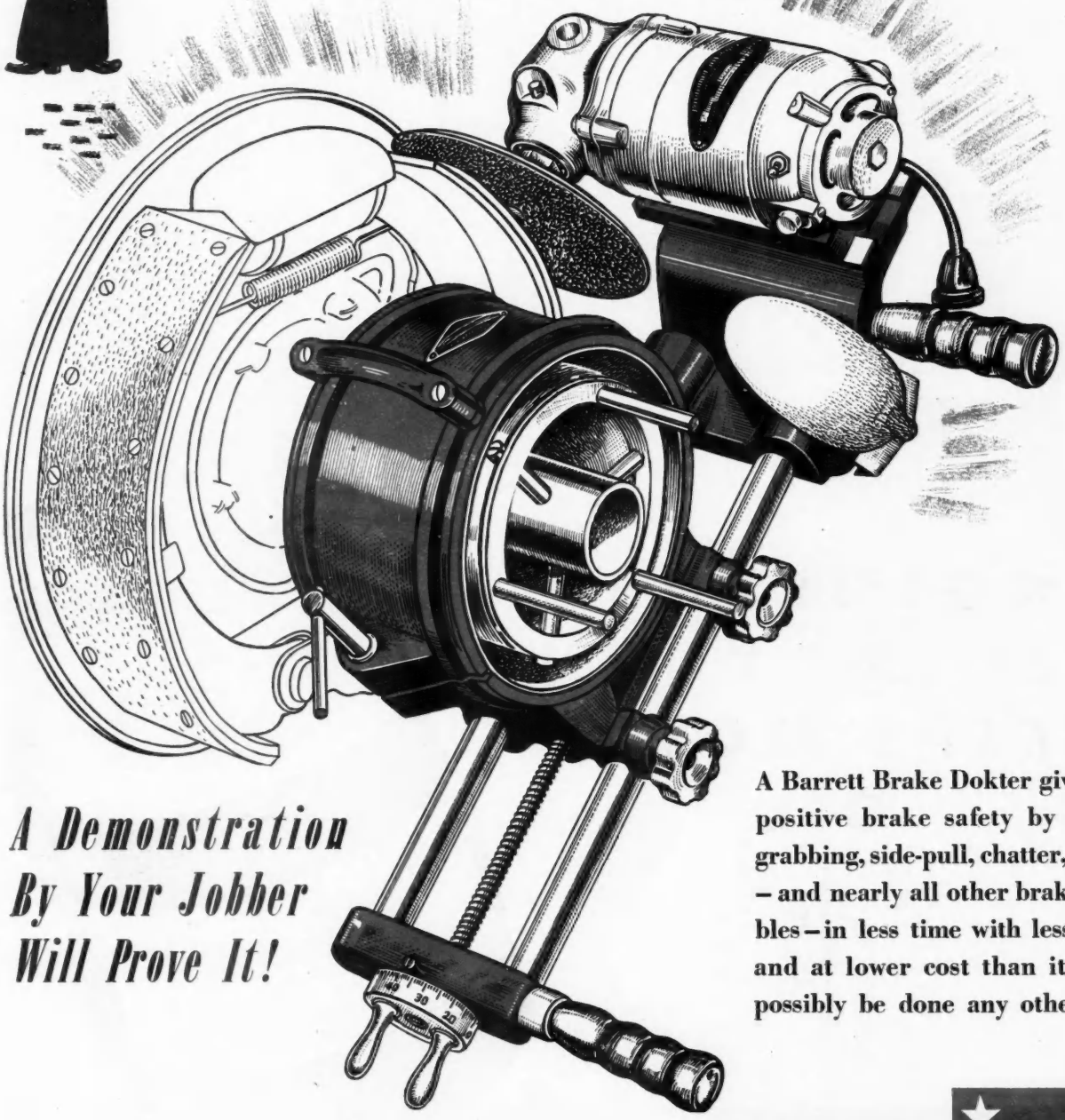


FOR ALL YOUR TIRE AND TUBE REPAIR NEEDS!



Barrett Says:

Safer Brakes at Less Cost Per Mile!



A Demonstration By Your Jobber Will Prove It!

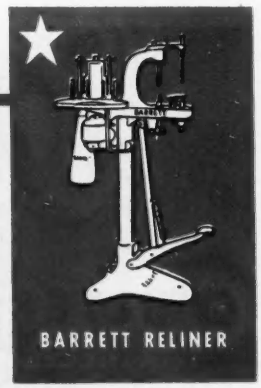
A Barrett Brake Dokter gives you positive brake safety by curing grabbing, side-pull, chatter, diving – and nearly all other brake troubles – in less time with less effort and at lower cost than it could possibly be done any other way.

BARRETT
EQUIPMENT CO.
The World's Finest Brake Service Equipment

TWENTY-FIRST AND CASS • ST. LOUIS 6, MISSOURI



BARRETT
BRAKE DRUM LATHE



BARRETT RELINER



THAT'S HOW
wix
ENGINEERED
FILTRATION
KEEPS MOTOR
OIL

ENGINEERED FILTRATION



wix
TRADE MARK

FILTERS AND FILTEREFILS

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Warehouses: CHICAGO • DALLAS • KANSAS CITY • LOS ANGELES • MINNEAPOLIS
SAN FRANCISCO • Canadian Factory: WIX ACCESSORIES CORP. LTD., 11 Wabash Ave., Toronto 3, Ont.



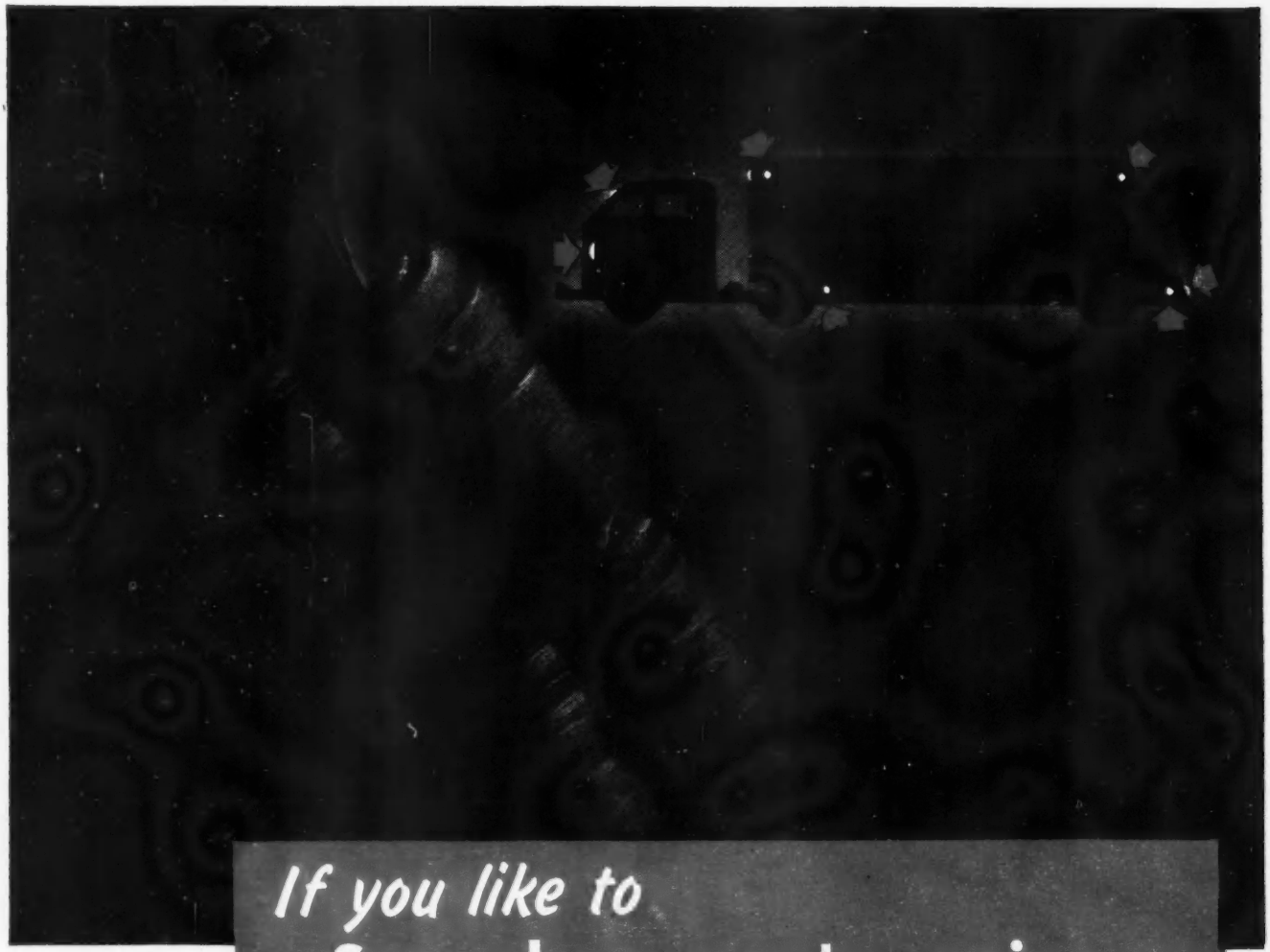
Trico means HEAVY DUTY

● It takes a real *heavy duty* windshield wiper for satisfactory service on trucks and buses. And that means Trico, since Trico Heavy Duty Vacuum Wipers are engineered and built especially for that use. They've got the powerful action needed to keep swinging even under the toughest going . . . the rugged construction and dependable mechanism to give many extra thousands of miles of trouble-free service. Continuous operation under load is provided by the auxiliary Reservac, now available in new economy capacities.

For trucks and buses equipped with air brakes or other air supply, the Trico Air-Pressure Wiper is the answer for heavy, rugged duty.

TRICO Windshield Wipers

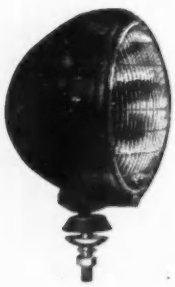
Trico Products Corporation, Buffalo 3, N. Y.



If you like to See where you're going . . .



FOG LIGHT
Model No.
A400A



SEALED BEAM
HEADLIGHT
Model No.
775-H

Eating carrots, doctors say, is one way to acquire better night-vision. An easier and better way, of course, is to let Arrow candle-power do the work for you. Arrow sealed-beam headlights and fog lights are among the finest and most efficient ever developed. They throw a wide, intense beam that illuminates every twist and turn of a road. Fair weather or foul, they give you the utmost in safety and driving comfort. Like all other dependable Arrow products—Arrow tail lights, directional signals, reflectors, mirrors, flares—they are well engineered, ruggedly built, designed to stand up under years of hard use. Let Arrow be your guide to greater *Safety After Dark.*

SAFETY ARROW DEVICES

ARROW SAFETY DEVICE CO., MOUNT HOLLY, N. J.
SAFETY AFTER DARK

BLUE STREAK

"Firsts"



It's easy enough for a man to follow in the footsteps of others; to do no more than is asked of him. But the man who finds new solutions to old motor problems is, without question, a leader. Here is evidence that Blue Streak ignition parts are the leaders in their field. Again and again, Blue Streak has been "first" with an ignition product that contributed to longer life and better car performance.

"FIRST" HEAVY DUTY BREAKER ARM 1933

"FIRST" HERMETICALLY-SEALED CONDENSER 1934

"FIRST" HEADLIGHT RELAY 1937

"FIRST" COMPLETELY SEALED DIMMER SWITCH 1938

"FIRST" TRIPLE-PROTECTION TOP COIL 1940

"FIRST" VINYLITE AUTOMOTIVE CABLE 1946

STANDARD MOTOR PRODUCTS, INC.

37-18 Northern Boulevard, Long Island City 1, New York • 911 East Pine St., Seattle 22, Washington

for MOTOR PROTECTION

Every Mile... Night and Day





PRESSURE CLIX

LOST OIL PRESSURE MEANS DANGER!

Pressure Clix warns clearly, definitely and reliably whenever oil pressure goes down to the danger point. It will ring a bell, sound a buzzer or light a warning light, or *shut off the ignition.*

Also used widely for warning of lost air pressures in braking systems.

Rugged—dependable—sealed against tampering, and extremely low maintenance.

THERMO CLIX



Excessive temperatures can mean costly repair jobs. Thermo Clix tells your driver the instant that temperature reaches the danger point—and it can be wired to cut off the ignition, sound a warning alarm or light a "danger lamp" on the instrument panel.

Write for a complete folder telling the complete story of these quality instruments.

THE NASON COMPANY

7663 EPWORTH BOULEVARD • DETROIT 4, MICHIGAN

"GUINEA PIG" fleets cut profits!



You are the one who "takes it on the chin" by experimenting with heavy duty oils. Somebody makes a profit when you buy the wrong oil, but fleet owners can take a loss, and a stiff one.

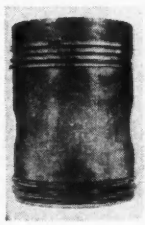
On the other hand, it's good business for Wolf's Head to experiment because that's how we developed "the finest of the fine." World-famous laboratories made many tests—over and over again—so that Wolf's Head could give fleet owners the one heavy duty oil that was consistently proven superior . . . the oil with the highest rating on *all five* heavy duty factors.

Send for the free booklet describing these tests of heavy duty oils. See for yourself the proof of Wolf's Head superiority . . . how Wolf's Head can lower maintenance costs, conserve engine life, cut down-time, improve performance. Wolf's Head Oil Refining Co., Inc., Oil City, Pa., New York 10, N. Y.

LABORATORY TEST PROVES WOLF'S HEAD IS BEST



◀GM Diesel Piston after 500-hr. "endurance" test. Heavy varnish on piston skirt. Excessive bearing corrosion—weight loss 1450 Milligrams. Rating: "Very Poor". Oil used: Nationally advertised competitive heavy duty oil.



GM Diesel Piston after 500-hr. "endurance" test. Only slight trace of varnish. Rings entirely free. Bearing weight loss only 27 Milligrams. Rating: "Excellent". Oil used: Wolf's Head Heavy Duty Oil.

LABORATORY CONTROL SERVICE *gives fleet operators specific recommendations for their units, based on analysis of crankcase oil. Helps to establish correct drain periods, conserve engine life, reduce lay-ups . . . frequently reveals unsuspected engine troubles. Free and without obligation.*

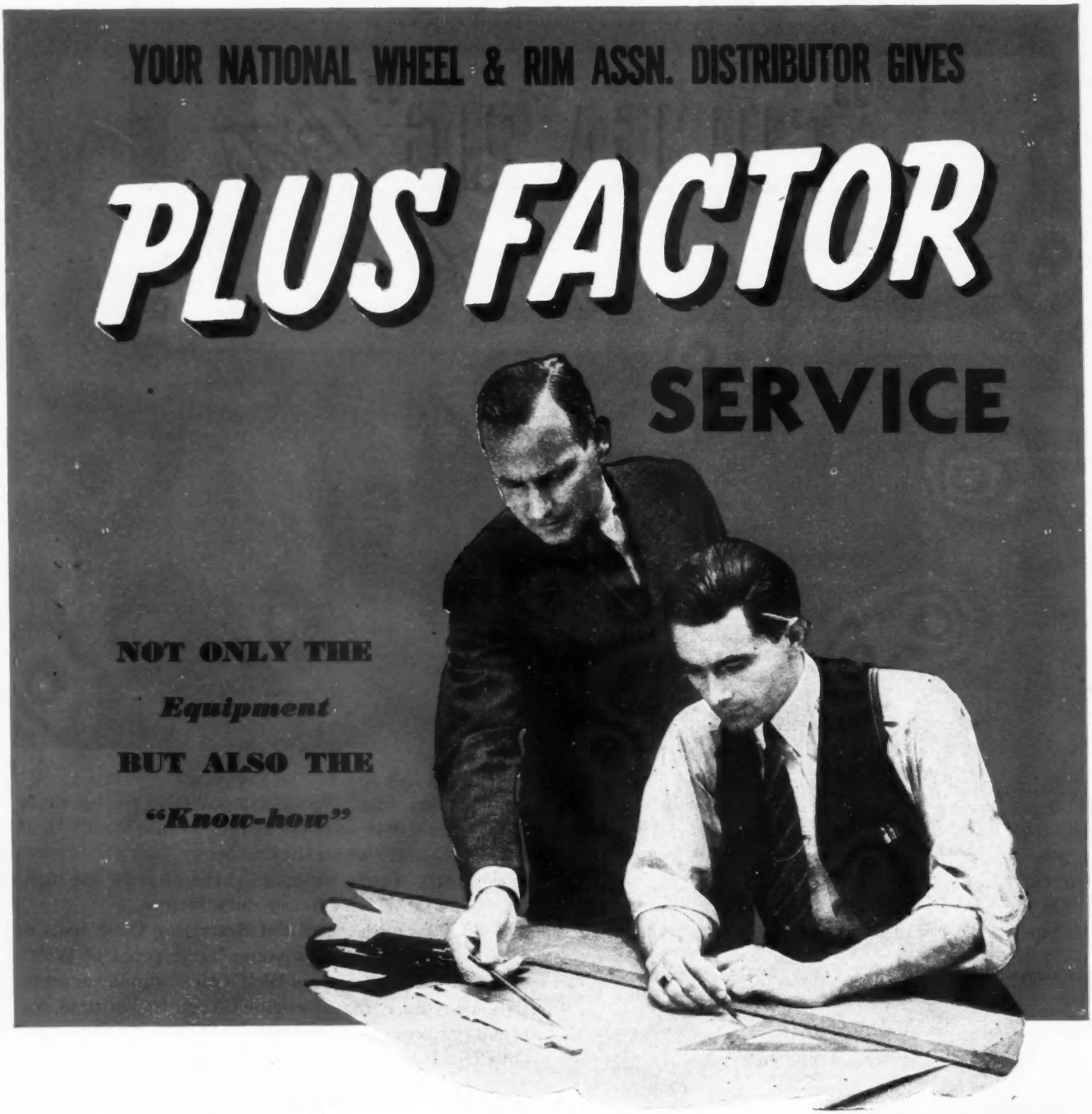
WOLF'S HEAD

MOTOR OIL AND LUBES

100% Pure Pennsylvania P.G.C.O.A. Permit No. 6

YOUR NATIONAL WHEEL & RIM ASSN. DISTRIBUTOR GIVES

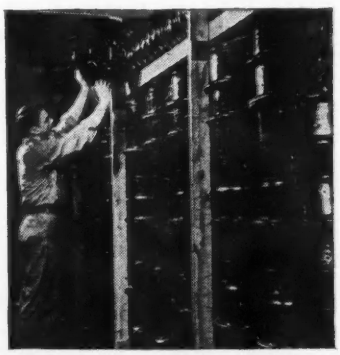
PLUS FACTOR SERVICE



Time was when fleet owners expected—and got—from wheel and rim distributors nothing else than the bare replacement parts necessary to keep their vehicles in operation. But today, the **plus factor service** of National Wheel & Rim Association distributors provides not only the best in equipment, but also the best engineering recommendations in how it can be used most effectively.

You are interested in the maximum in tire mileage, of course! They can give the scientific answer as to the size of wheel or rim and tire—the correct wide base combination to work most economically. You may wonder whether it should be dual wheels or large single wheels for some particular job. Or, yours may be one of a dozen or more problems on anything from braking traction, from chain clearance to wheel balance. They can set you right, these experienced engineers trained to NW&RA standards.

It is worth while to know and do business with the National Wheel & Rim Association distributor in your area—to get the benefit of **plus factor service!** And, if you do not know your NW&RA distributor—write today for information from National Wheel & Rim Association, 3315 Locust Blvd., St. Louis, Mo.



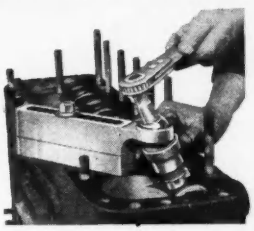
FROM SMALL PARTS TO BIGGEST WHEELS, from rims and brake drums to balance weights—the bins and racks of NW&RA distributors are ready to supply your replacement and change-over needs. Ask now for your copy of the new 1947 catalog which lists equipment in easy-reference sectionalized form.

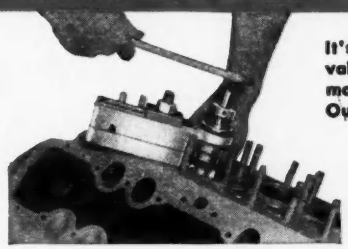
MAKE *every* VALVE SEAT INSERT JOB *profitable*

DO IT THE "KNOCK-OUT" WAY!



Inclined valves are no problem with a "Knock-Out" Reseater Tool.





It's easier to insert valve seats on V-8 motors with a "Knock-Out" Reseater Tool.

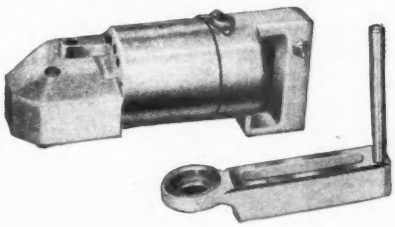


FAST—ACCURATE—POSITIVE

Valve seat insert jobs are more profitable when you use "Knock-Out" Reseater Tools.

Fast, easy to set up on any type motor—insert proper reseater cutter and pilot, set stop for depth, cut valve seat recess quickly, accurately.

There is a "Knock-Out" Reseater Set to fit your shop whether you specialize in one make of motor or repair every kind.



"Knock-Out" POWER DRIVE

The NEW "Knock-Out" Power Drive fits *any* K. O. Reseater Tool—does the job even faster, easier, better—adds still more profit to valve seat insert jobs. No hand pressure required. Just set this streamlined Power Drive on top the "K. O." Reseater Tool, snap on the switch and let it do the work. ASK YOUR JOBBER or mail the coupon.

if it's a **LEE** *it's a* "KNOCK-OUT"

K.O. LEE COMPANY
ABERDEEN, SOUTH DAKOTA

Fill in and mail today

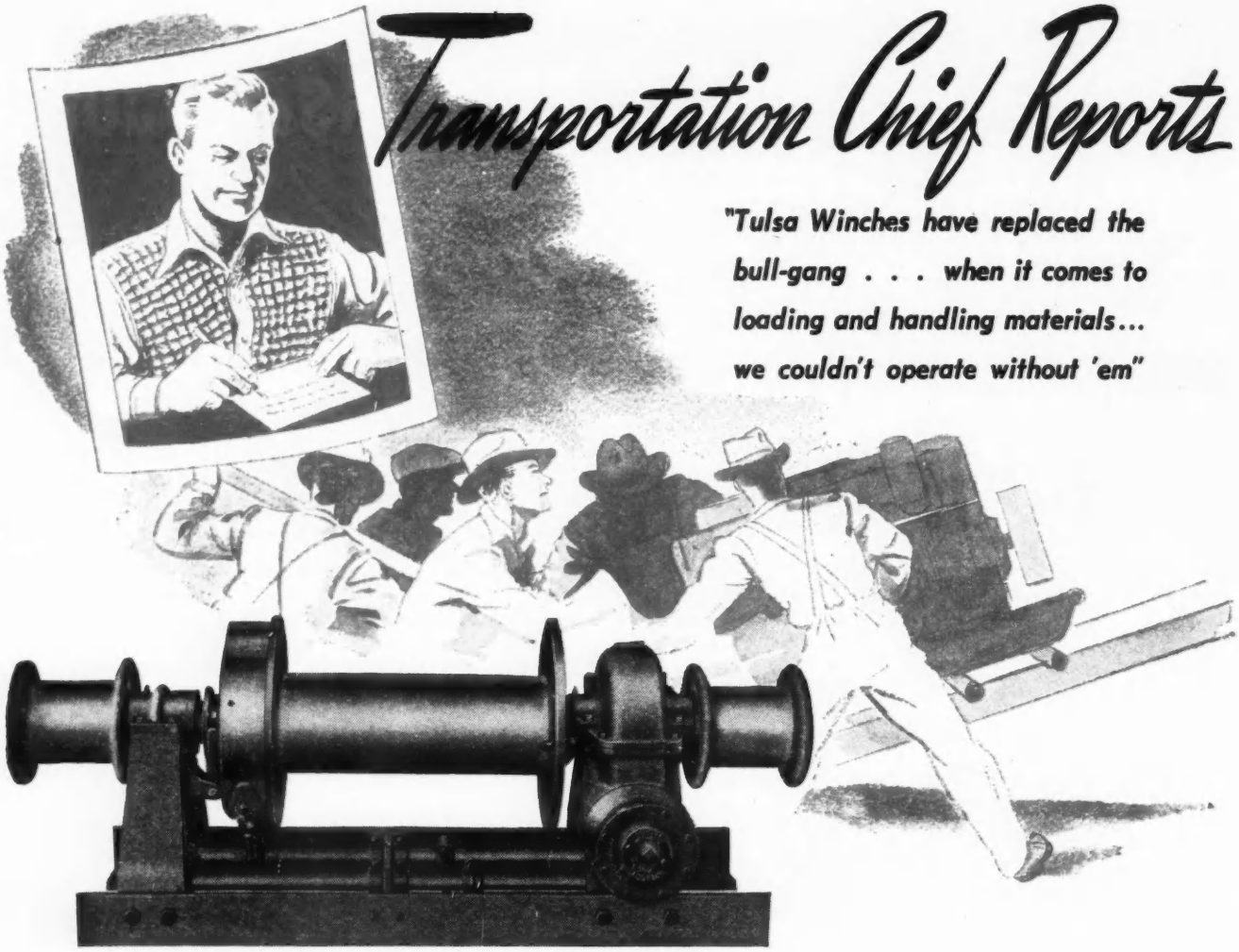
4

K. O. LEE COMPANY
1103 First Ave. S. E., Aberdeen, S. D.
Please send us your illustrated catalogue on "Knock-Out" Reseater Tools.

NAME_____

ADDRESS_____

CITY_____ STATE_____



Transportation Chief Reports

"Tulsa Winches have replaced the bull-gang . . . when it comes to loading and handling materials... we couldn't operate without 'em"

TULSA WINCHES GET MORE WORK DONE IN *LESS TIME!*

Judging from the field reports, TULSA WINCH is built for those heavy-duty jobs . . . designed for long years of trouble-free service . . . made to out-last the average truck. And because they've won this repute, Tulsa Winches are being installed on more trucks every day . . . they get more work done in less time, which means time, money and man-hours saved! Tulsa Winches are conservatively rated with ample margin for safety. Literature on request.

BECAUSE OF:

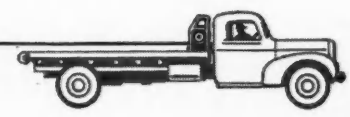
SMOOTH OPERATION,
made possible by superior engineering.

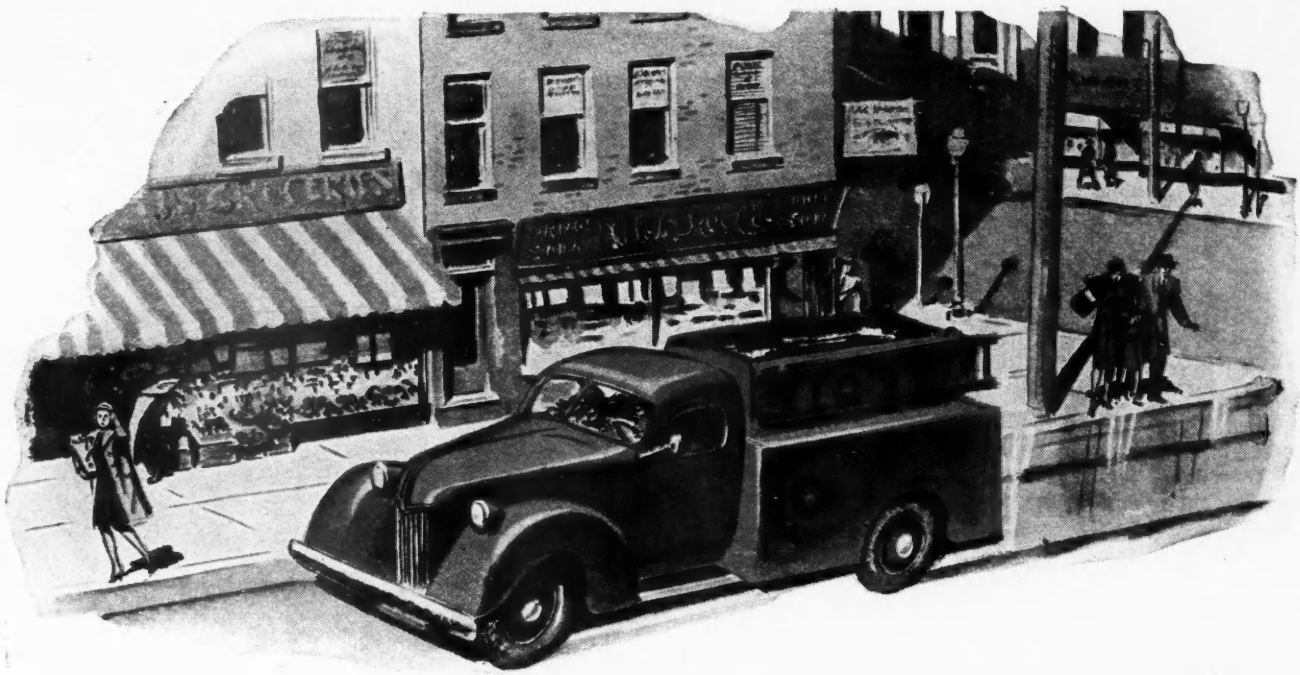
NO BREAKDOWNS,
for each Tulsa Winch is built of selected materials, and designed for rugged work and long life.

SAFETY FEATURES,
single thread worm and gear; automatic worm brake.

PERFORMANCE,
rated outstanding where ruggedness and dependability are required.

Tulsa Winch
TULSA, OKLAHOMA DIVISION OF VICKERS Inc.





ARE YOUR BRAKES TIRE-SCUFFERS?



HYCON

Compound **CYLINDER**

Eliminates brake lag, improves safety factor, simple and quick to install, cuts tire wear and fuel consumption, reduces maintenance.

Your trucks leave *money* on the pavement whenever locked brakes skid their tires—*money* in the form of rubber scuffed off onto the road. The tracks of a truck without *controlled braking* are streaks of waste. You can have positive braking control . . . equip your trucks with HYCON *Compound* Cylinders—the all-hydraulic brakes that deliver braking pressures in direct proportion to pedal pressures. They eliminate vacuum-actuated "boosters"; a *second piston* in the *compound* cylinder does their job.

HYCON Can't Freeze, Lock or Lag

Because they are 100% hydraulic, no moisture can enter HYCON cylinders to freeze. Their *positive control* reduces the danger of skidding and the waste of tire-scuffing. Operating independently of the motor, they save in gasoline consumption. They are economical in first cost and maintenance, and any mechanic can install them.

Give It a Test

The radically advanced principles of the HYCON *Compound* Cylinder can only be wholly appreciated in action. Order a trial unit and test it yourself. HYCON units are now available to replace 1¼" and 1½" Di. original equipment master cylinders. See your local power brake distributor or truck dealer or write direct to The New York Air Brake Company, 420 Lexington Avenue, New York 17, N. Y.

Look for this Registered Trade Mark



THE NEW YORK AIR BRAKE COMPANY

420 Lexington Avenue, New York 17, New York

From any ANGLE...

. . . . . Quality equipment pays off in the long run. Strick factory trained salesmen assure you complete analysis of proper equipment for your needs.

Accident damage easily repaired in your own shop.

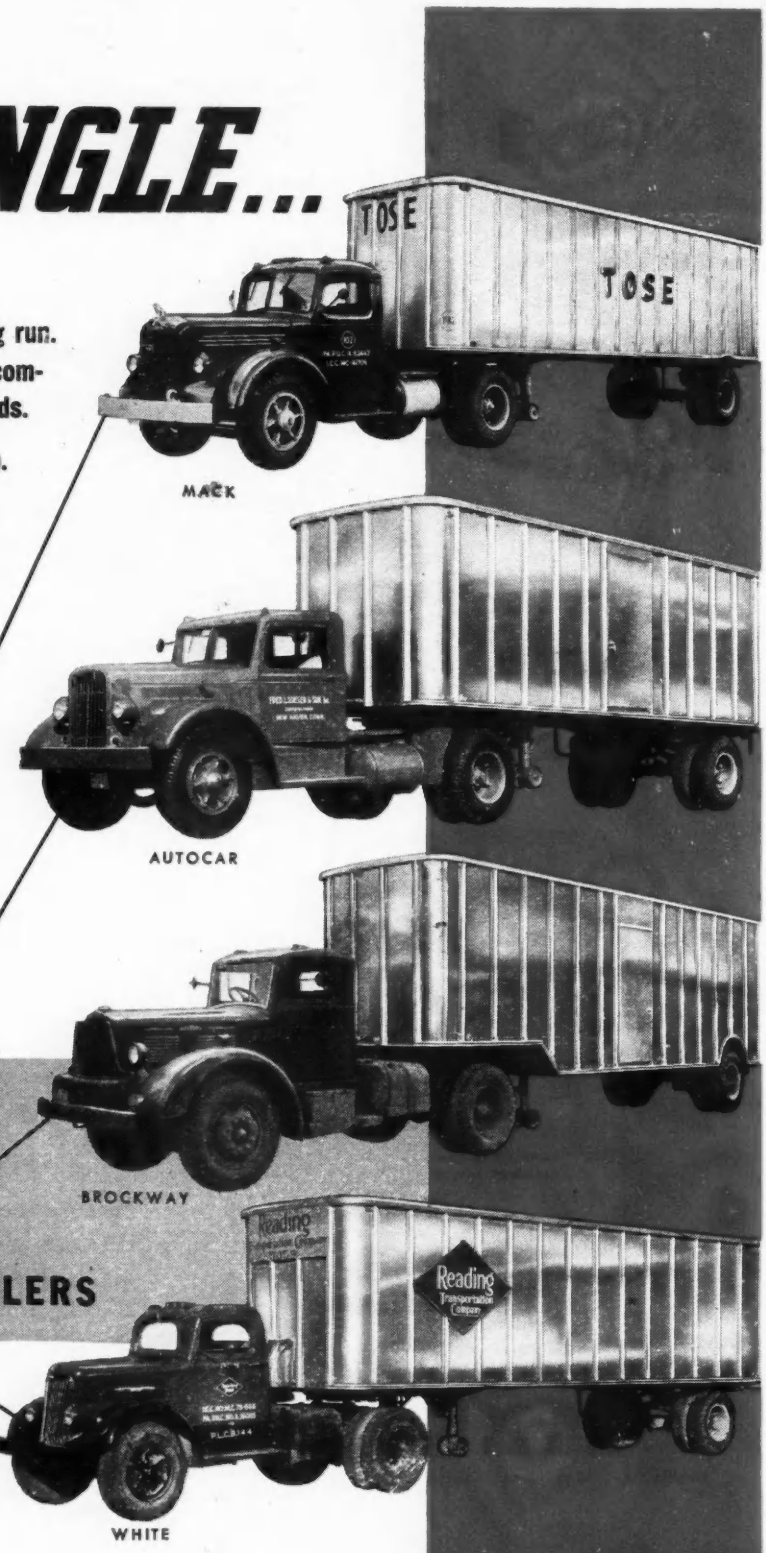
Trailers custom built for special requirements.

Aluminum provides lasting "new" appearance.

No repairs except those due to accidents.

Lightweight with durability.

Strick trailers carry loads up to 30 tons without bulging or sagging—your assurance of continual low cost hauling. Every one of the thousands of Strick aluminum frameless trailers built since 1938 is still on the road rendering low cost transportation.



BUY Strick TRAILERS

AND YOU BUY THE BEST!!

For Information — Write: Strick COMPANY

PHILADELPHIA 24, PA.

SPEAKER



ELECTROMATIC VULCANIZER

★ *Fully Automatic*

★ METERED HEAT CONTROL

★ PREDETERMINED PRESSURE

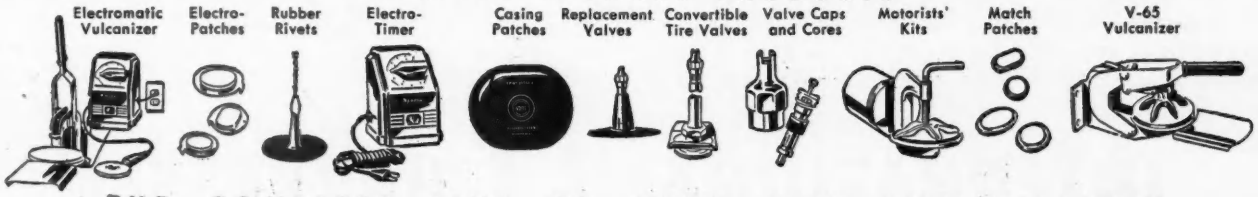
One word describes the new Electromatic ...SENSATIONAL! Yes, sir, you've never had anything like it! Tube repairs are a cinch now. You make them faster, easier, safer. Electromatic does the work for you. Merely set it... and forget it! Any tube injury or valve is dependably "welded" for keeps. Speaker Electro-Patches give you perfect, feather-edged repairs on either synthetic or natural rubber tubes every time. No failures. *And it's all done automatically!*

There's nothing like Electromatic for fast, low cost, convenient and safe tube repairing. It reduces maintenance costs — increases safety for drivers, vehicles, and payloads. Change now to the advanced Speaker Electromatic Method. Order from your jobber.

J. W. SPEAKER Corp., Milwaukee 12, Wis.



FAMOUS SPEAKER PRODUCTS



THE COMPLETE LINE OF TUBE AND TIRE REPAIRS

(Advertisement)

Any price is too high if it can be reduced

Fowler McCormick

International Harvester announces $20,000,000 price reductions

We believe there is nothing more important to this country than to lower the prices of the goods that people buy.

The American people have insisted that the government withdraw from its attempts to control prices in peacetime. That places the responsibility where it belongs—in the hands of business and industry. Not all business can reduce prices now. Not all can reduce by the same amount.

Our company has felt a duty to act as promptly as possible. In our case, the business outlook now makes it possible to move toward the goal of lower prices. The only way out of the vicious circle of higher and higher prices is to break through.

We have taken this step not because of present competitive conditions nor because of a drop in demand from customers. We have taken it because of our belief that ANY PRICE IS TOO HIGH IF IT CAN BE REDUCED.

These reductions, which will save the users of our products approximately $20,000,000 a year, will become effective before April 1, and will apply to a selected list of tractor, farm machine, motor truck, and industrial power products. Since we lose money on a few of our products, and barely break even on some others, these reductions will not apply to our entire line. Reductions will be made individually on products. Some will be cut more than others. Exact details will be announced as soon as possible.

IH prices had not gone up as much or as fast as many others

Here are Average Price Increases since 1941

All Manufactured Products... (U. S. Government Reports)	63.7%
Metals and Metal Products... (U. S. Government Reports)	41.2%
IH Motor Trucks.....	35%
IH Industrial Power Products..	34%
IH Farm Machines.....	25%

Our ability to maintain this lower level of prices will depend in part on what happens to the prices and flow of materials that we buy from others. Because we believe price reduction is vital, we are willing to assume the risks that are involved.

These benefits to customers will depend, too, on uninterrupted production at reasonable wage levels. This is not a program that can be carried out if it is hampered by strikes or work stoppages.

Our employes have had substantial increases in pay, and wage questions are currently being discussed with many of the unions with which we deal. Stockholders have recently had an increase in dividend rate. Having considered the interests of these two groups, we are now making these price reductions for the benefit of the third group—our customers.

Business, to our way of thinking, has a social as well as an economic responsibility. This company has long followed the policy of operating in the interests of three groups—its customers, its employes and its stockholders. The duty of the management is to see that equal justice is done as between the three groups.

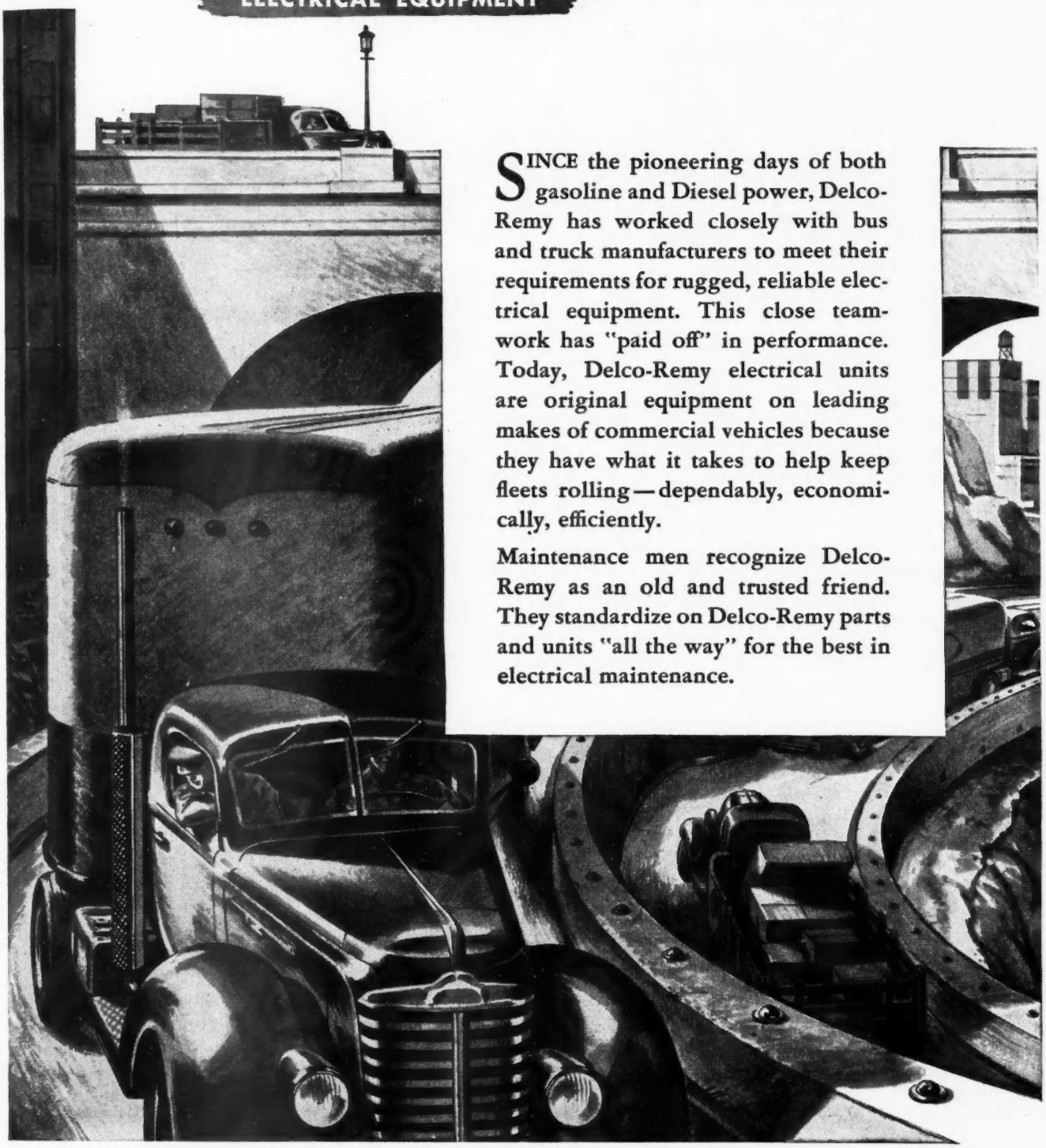
This price reduction program is another demonstration of our policy in action.

INTERNATIONAL IH HARVESTER

Gasoline or Diesel . . .

IT'S DELCO-REMY ALL THE WAY

ELECTRICAL EQUIPMENT



SINCE the pioneering days of both gasoline and Diesel power, Delco-Remy has worked closely with bus and truck manufacturers to meet their requirements for rugged, reliable electrical equipment. This close teamwork has "paid off" in performance. Today, Delco-Remy electrical units are original equipment on leading makes of commercial vehicles because they have what it takes to help keep fleets rolling—dependably, economically, efficiently.

Maintenance men recognize Delco-Remy as an old and trusted friend. They standardize on Delco-Remy parts and units "all the way" for the best in electrical maintenance.

UNITED SERVICE MOTORS

DELCO-REMY—A UNITED MOTORS LINE
Service Parts and Batteries Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

Delco-Remy
DIVISION, GENERAL MOTORS CORPORATION
ANDERSON, INDIANA

WHEREVER WHEELS TURN OR PROPELLERS SPIN

LARGE FLEET OPERATOR* REPORTS . . .



Name of Fleet Operator Will Be Furnished Upon Written Request.

with

BOWERS

Double-Duty Batteries

That's the actual experience reported to us through an unsolicited letter from a large fleet operator. After trying several brands of heavy duty batteries in his fleet of trucks, we asked him to TRY our batteries and keep an accurate record of performance and mileage. His road TEST was a fair one, and his results were: *over 50% more service rendered than by any other battery he had used.* This experience is not unusual. It is typical of the longer service being enjoyed by many big operators who have equipped their fleets with Bowers Double-Duty Batteries. RIGHT NOW IS THE TIME FOR YOU TO MAKE THIS BATTERY TEST YOURSELF, IN YOUR FLEET. Trial-and-check will *prove* more forcefully than our mere words the DEPENDABILITY, LONGER LIFE and LOWER MAINTENANCE with this rugged battery which is specially engineered to deliver double duty.

Write Today for Complete Information

BOWERS BATTERY & SPARK PLUG CO. • READING, PA.

BOWERS

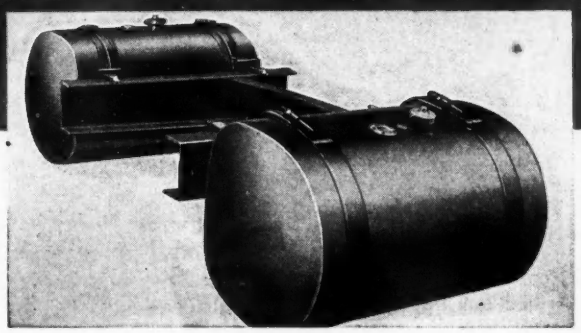
DOUBLE DUTY BATTERIES AND SPARK PLUGS

No Wonder we worked so fast...



Ob-round set

Patents Pending



Ob-round pair

...to bring you

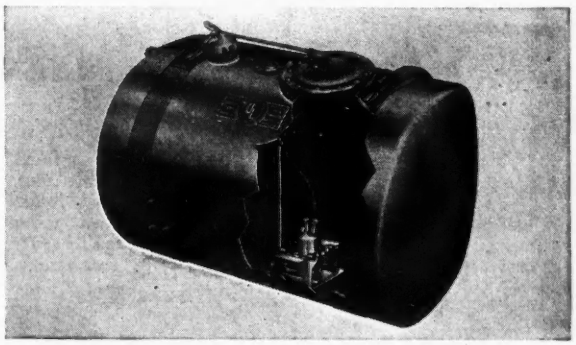
Prior Ob-Round Tanks

in sets, pairs, and singles

LESS WEIGHT per gallon, unequalled strength, simpler-than-ever installation, modern frame-hugging design, safety without shadow of a doubt — these are the good, solid reasons that Prior Ob-Round Tanks won such immediate acceptance in only two months. These features — plus Prior's good name in the field — led cost-wise operators to start buying and installing Ob-Rounds as fast as we could make them.

And now you can get Ob-Round tanks in Prior's full range of types and sizes. Visual gage is standard equipment as well as fuse plug and vented brass filler cap with ball check.

"Ob-Rounds with Carter" structurally and functionally make an unbeatable combination. Too, you can obtain Prior Ob-Round or Cylindrical tanks equipped to receive Carter Electric Pusher Pumps.



Ob-round single, with cutaway view showing Carter Electric Pusher Pump installation.

WRITE, WIRE OR SEND THIS COUPON TODAY TO OUR NEAREST OFFICE

PRIOR PRODUCTS, INC.

BOX 349 MIDDLETOWN, OHIO • BOX 5686 DALLAS, TEXAS

Please send me complete information on Prior Ob-Round and Cylindrical Safety Tanks, and the name of your nearest distributor.

CCJ—447

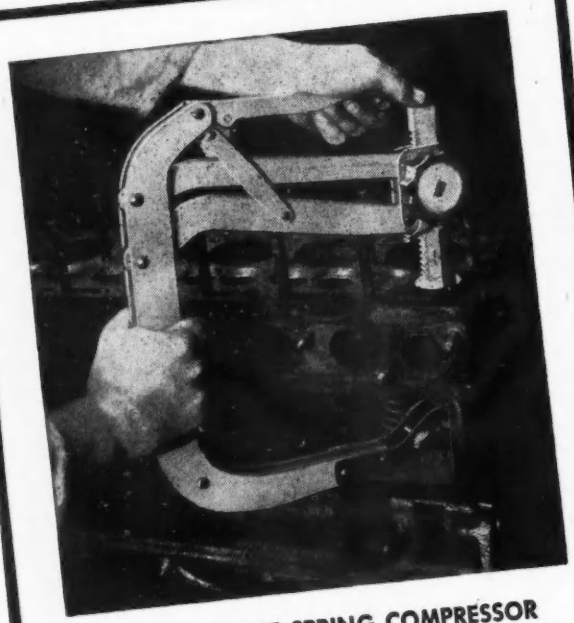
NAME_____

STREET_____

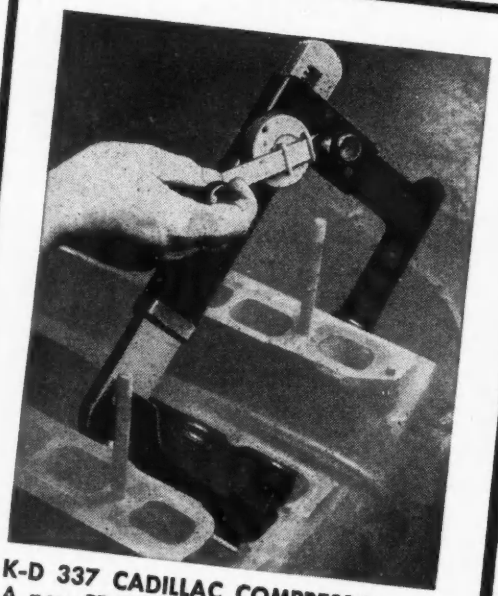
CITY_____ STATE_____

K-D TOOLS

At Jobbers' everywhere

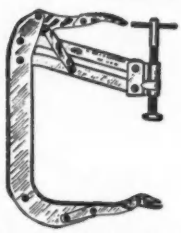


K-D 380 VALVE SPRING COMPRESSOR
The most popular and universal compressor on the market. Services nearly all L-head and valve-in-head motors, old and new. Exclusive automatic depth adjustment and quick-operating handle make it fast and easy to operate. Sturdy steel frame. Two sets adjustable jaws. No. 38 Extra high offset jaws extra.



K-D 337 CADILLAC COMPRESSOR SET
A new K-D Tool. Services all Cadillac and LaSalle V-8 motors starting with 1935. One mechanic can remove and replace all valves without walking from side to side. Unique brake provides positive locking at height desired. Comprised of No. 335 Valve Spring Compressor (shown above on a Cadillac motor) and No. 336 Valve Keeper Inserter.

. . . make hard jobs easy . . .



K-D 385 VALVE SPRING COMPRESSOR
For small L- or valve-in-head motors, manifolds removed. Services Chevrolet "Master," "Standard." Adjustable plunger bar and safety over-center lock. Adjustable jaws.

K-D VALVE KEEPER INSERTERS
Make a hard job easy and make it pay. Strong, fast, easy to load! Self supporting on valve stem, leave hands free. Known and liked by mechanics everywhere.



No. 605 handles nearly every type and size of split keeper made.
No. 336 furnished with 337 Cadillac Compressor set.



K-D 600 VALVE SPRING LIFTER
An old favorite — for L-head motors old and new. Strong, dependable. Adjustable parallel jaws, improved ratchet lock. Right for Auburn, Graham, Hudson, Hupmobile, Lafayette, LaSalle (Str. 8), Nash, Olds, Packard, Pontiac, Studebaker, Willys.

Write for latest Catalog. K-D MFG. CO., Lancaster, Pa., Hamilton, Ont., Canada

K-D TOOLS



Avoid Truck Tie-ups... Cut Lettering Costs...

Quixign's Sprayed Lettering System like Motor Transportation is here to stay, they both represent the ultimate in streamlined methods in their fields.

Thousands of fleet owners, as well as America's largest manufacturers of coaches, trucks, etc., are using Quixign Stencils to reproduce all sizes and styles of lettering. It's efficient, speedy, durable, economical and above all "easy to do".

Here are two ways in which we serve fleet owners: 1. We supply Quixign Stencil Paper—Quixign Adhesives—Quixign Paints for companies equipped to cut their own stencils and letter their trucks. 2. We furnish Quixign Ready-to-apply Stencils, either coated or plain, in any letter height or style lettering they require to reproduce in one to four colors. These stencils can be brushed or sprayed to produce beautiful clean-cut letters. A special stencil paper and adhesive are available now for both operations. It works perfectly.

Write for the new detailed folder that explains the Quixign Lettering System.

ANOTHER HELP

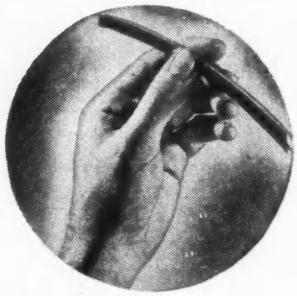
A new creative department offering transportation and fleet operators suggestions to help make fleet equipment more attractive such as: Pleasing Color Combinations, Original and Modern Lettering Layouts, Streamline Color Designing. For details write, Creative Service Department c/o our company.

ASHLEY **QUIXIGN** COMPANY

15330 IDAHO AVENUE DETROIT 3, MICHIGAN

CRESCENT-WIRY JOE

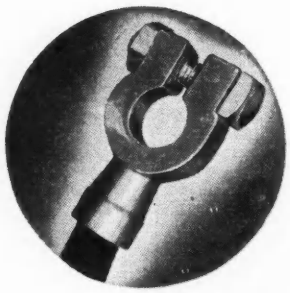
REMEMBER INTRODUCTION OF MAROON WIRE AND CABLE (A DISTINCTIVE CRESCENT-WIRY JOE PRODUCT)?





LATER CAME THE COPPER LUG, PRESSURE WELDED TO ELIMINATE SOLDERED OR BURNED AND FRAYED INSULATION.

THE HEAVY BRASS TERMINAL WAS ANOTHER STEP, THE FIRST AND ONLY TERMINAL TO BE ELECTRONICALLY SOLDERED.





CRESCENT-WIRY JOE LEADERSHIP WAS AGAIN DEMONSTRATED WITH THE SPOOLED CABLE DISPENSING BOX WHICH REALLY WORKS.

THE NEW ART DESIGN SHOWN BELOW, A STRONG, ATTRACTIVE, METAL-EDGE PACKAGE FOR BATTERY CABLES, SPOOLED CABLE AND IGNITION SETS, CONSTITUTES LATEST STEP IN CRESCENT-WIRY JOE PROGRESS.



When next in our neighborhood stop in—see how Crescent-Wiry Joe Cable is made from bare copper to finished product in one plant, under one roof!

SAFETY FONTAINE

NO-SLACK



The Only "NO-SLACK" 5th Wheel, it eliminates all slack between the Truck and Trailer.

FONTAINE

NO-SLACK

5th Wheels

Sold through Truck Dealers

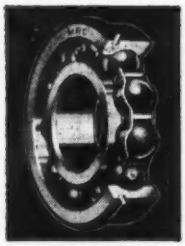
DISTRIBUTORS WANTED

Write for Details—Today!

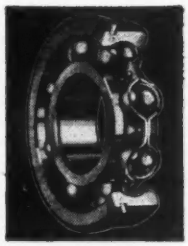
FIFTH WHEEL DIVISION
Fontaine Truck Equipment Co., Inc.
3819 First Ave., North Birmingham, Ala.

M-R-C BALL BEARINGS

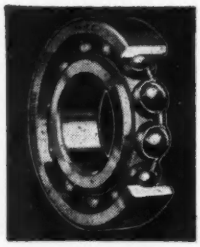
Complete Range of Types for All Requirements



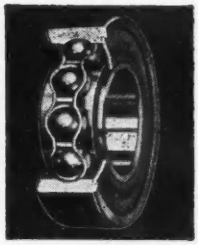
Maximum-Capacity Snap-Ring Type



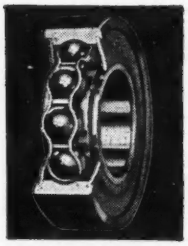
Super-Conrad Snap-Ring Type



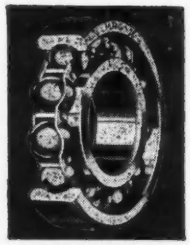
Radial Type R Maximum-Capacity



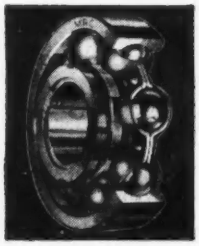
Maximum-Capacity Single-Shielded



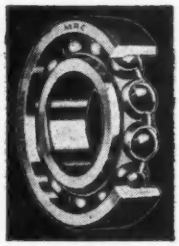
Maximum-Capacity Double-Shielded



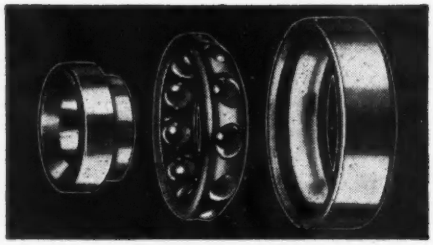
Maximum-Capacity Notched Type



Adapter Type



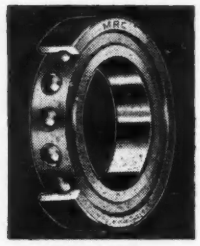
Radio-Thrust Angular-Contact



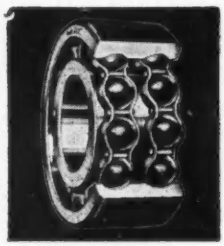
Front Wheel Bearings
Inner Race — Ball Retainer — Outer Race



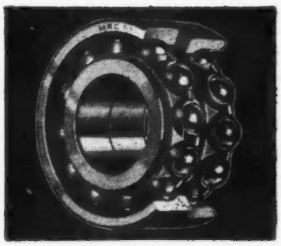
Super-Conrad Snap-Ring Type Single-Shielded



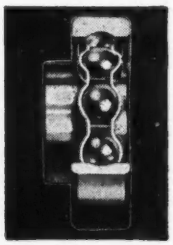
Single-Row Extra-Light Type KR



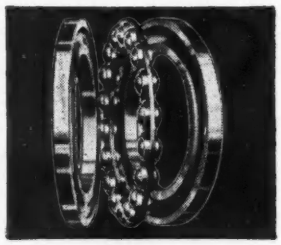
Double-Row Maximum-Capacity Type



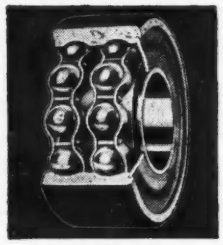
Duplex



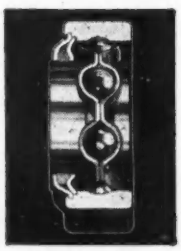
Wide-Inner Bearing



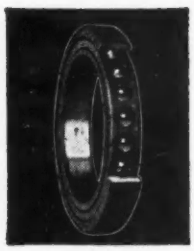
Thrust Bearing Flat Washer Type



Double-Row Single-Shielded



Fabri-Seal Type with Sealing Ring



Extremely-Light Inch-Size

"M-R-C BALL BEARING INTERCHANGEABLE TABLES"

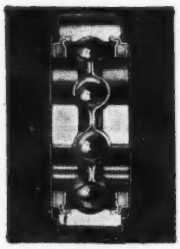
Ball Bearings of Various Makes in Numerical Order and Corresponding Sizes of M-R-C Replacements.

This bulletin contains a list of bearing numbers of over 12,000 different ball bearings made by various American ball bearing manufacturers.

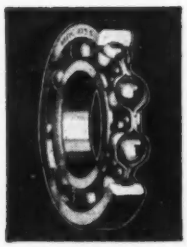
Sent free on request — Ask for Bulletin No. 26



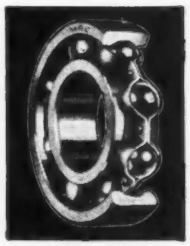
Extra-Small (Miniature)



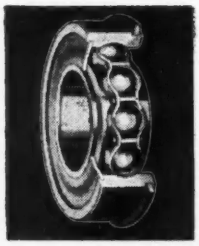
Double Felt-Seal Shielded Both Sides



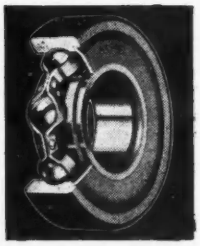
Narrow-Type Bearing



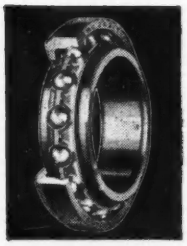
Super-Conrad Deep-Groove Type



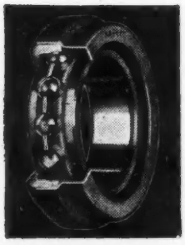
Max.-Capacity Snap-Ring Type Single-Shielded



Super-Conrad Type Single-Shielded



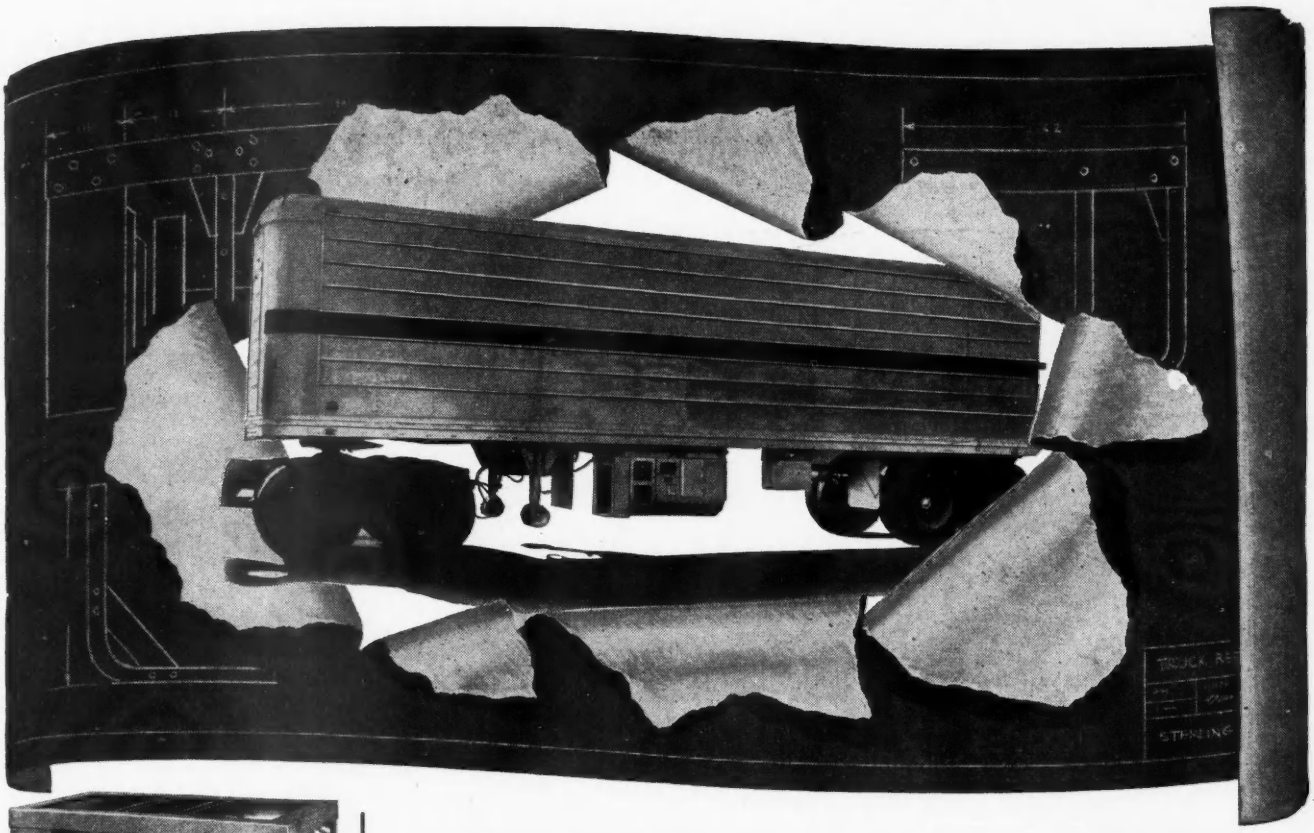
Clutch Throw-out Plain

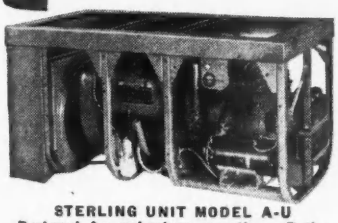


Clutch Throw-out with Housing

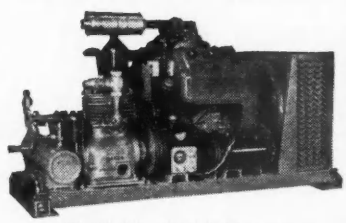
MARLIN-ROCKWELL CORPORATION

Executive Offices: JAMESTOWN, N. Y.

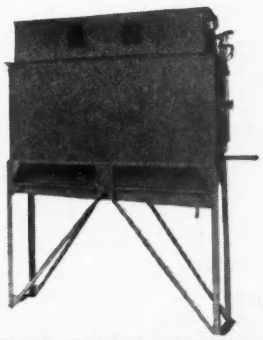




STERLING UNIT MODEL A-U
Designed for underslung mounting. Entire structure made of steel and stressed for high safety factor. Removable panels provided with convenient service doors. Over-all dimensions, 53⅛" long, 27" high, 28" wide.



STERLING UNIT MODEL A
For mounting inside truck or trailer on housing frame at forward end of body; accessible through a service door. Inside unit mounted on aluminum frame. Over-all dimensions, 64" long, 30" high, 30" wide.



STERLING UNIT COIL ASSEMBLY
Compact coil assembly dimensions 53¼" high, 63" long and 13¾" wide. Engineered to properly balance capacity of power unit. Twin multivane fans driven by ¼ h. p. motor for positive circulation. Temperature range from —20° to 50°.

NO LONGER A BLUE PRINT—

A Proven Product in Production

NOW AVAILABLE—to shippers and fleet owners—two new Sterling truck refrigeration systems that offer a pay load of features and advancements that fleet owners and shippers are quick to recognize.

System consists of gasoline engine driven refrigeration "power unit" and Sterling engineered cooling coil assembly. Of compact design, total weight complete with coil assembly, approximately 1,000 pounds. Shockproof mounting assures trouble-free operation. May be operated for long periods without necessity of defrosting cooling coils.

Tried and proven, and engineered to handle the largest truck or trailer built, the power units are completely automatic and may be mounted either underslung or inside. Assembly is complete with (1) a four-cylinder, V-type, air-cooled gasoline engine; (2) twin cylinder vertical Freon compressor; (3 8-row air-cooled condenser with a propeller-type fan enclosed in an aluminum housing; (4) liquid receiver of special design; (5) direct current generator; (6) heavy duty storage battery; and (7) control panel.

STERLING

A New Force in the Transportation Refrigeration Picture

•

For Complete Details and Specifications, Write

Sterling Manufacturing Co.

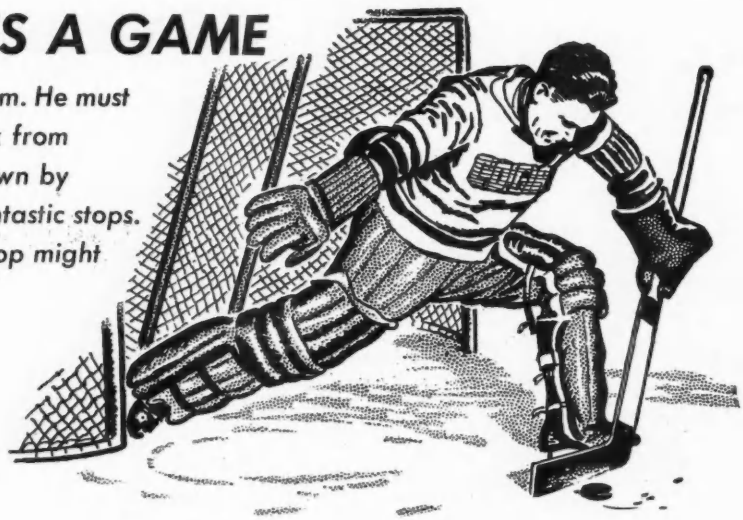
2523 Farnam Street • Omaha, Nebraska

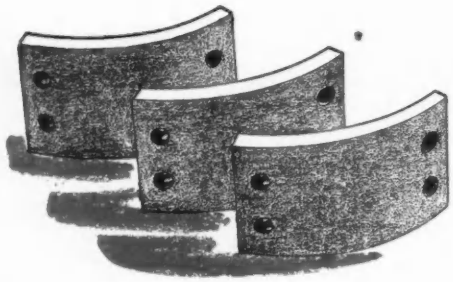
TRANSPORTATION REFRIGERATION AND AIR CONDITIONING UNITS

Famous Stops

THE STOP THAT SAVES A GAME

The goal tender is keyman of any hockey team. He must be fast and sure to keep the speeding puck from scoring in the net behind him. Weighted down by 30 pounds of braces and pads, he makes fantastic stops. Every stop he makes is important . . . any stop might mean winning the game.



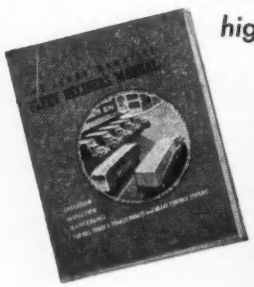


FAMOUS FOR SURE STOPS

in buses, trucks and passenger cars are Johns-Manville Brake Linings, the oldest name in the field. Complete control of material quality from mine to finished product has produced brake materials with exceptional heat-resistance, uniform friction and durability . . . giving the needed split-second braking for today's high speeds.

STOP A MOMENT

and write for your copy of the Johns-Manville Fleet Reliner's Manual . . . 80 pages of charts, diagrams and other information on operation, inspection and maintenance for bus, truck and trailer brake systems. It includes a step-by-step procedure for relining brakes, the correct friction materials to use, and the outstanding differences between various brake systems. Address: Johns-Manville, Box 290, New York 16, N. Y.



Johns-Manville BRAKE MATERIALS

JOHNS-MANVILLE JM PRODUCT

• BRAKE LININGS • BRAKE BLOCKS • CLUTCH FACINGS



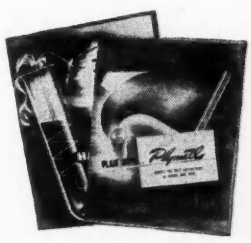
This truck operator has hit pay dirt . . . close to 1½ tons of it.

By using Plymetl and eliminating deadweight, Bedell Trailer Sales increased the payload capacity of the above trailer by nearly 1½ tons. The trailer pictured weighs 11,860 lbs. It has a 35′ Bedell Custom Built body of ¼" Plymetl (aluminum faced) mounted on a Kingham Tandem trailer. Another unit (not Plymetl) of a competitive make, operated by Willingham Motor Lines, weighs 14,800 lbs.

Plymetl is made by an exclusive Haskelite process which bonds light gauge metals, steel, stainless or aluminum, to one or both faces of a plywood panel. No other sheet material suitable for body construction can equal Plymetl's strength and rigidity. For this reason, Plymetl will reduce the gross weight of your trucks. Because of its great resistance to bending, use of Plymetl requires fewer or lighter framing members. The material is hard to dent and does not buckle.

Bodies made of Plymetl last longer . . . lower tire wear . . . can reduce fuel consumption . . . look better and require less maintenance. In addition, Plymetl has about one thousand times the insulating value of sheet metal.

Decrease inefficiency and eliminate deadweight in your trucks and trailers. Specify Plymetl. Plans with Plymetl Prove Profitable.



A new free booklet entitled "Plan With Plymetl" has just been completed. This contains the latest information on construction and fabrication with Plymetl. Write today for this new booklet which tells how you can save with Plymetl.

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MANUFACTURING CORPORATION

Dept. TC-2 Grand Rapids 2, Michigan

NEW YORK CHICAGO DETROIT CLEVELAND ST. LOUIS PHILADELPHIA LOS ANGELES

CANADA: Railway & Power Engineering Corporation, Ltd.

ANNOUNCEMENT
1947

Henceforth, our slogan will state a contention we have long held to be true: "The best Decalcomania is none too good!"

Permalux* will always cost a bit more, but it is — *and will ever be* — made for the discriminating few who know that maximum savings are contained in the purchase of maximum quality.

We are not desirous of becoming "Big Business". Our move to a larger plant was occasioned by a demand far in excess of our ability to produce — not by our intention of becoming "volume" manufacturers. We shall continue to supply only Decalcomania which we believe to be the finest obtainable. We invite inquiries from those who are interested in that type of product.

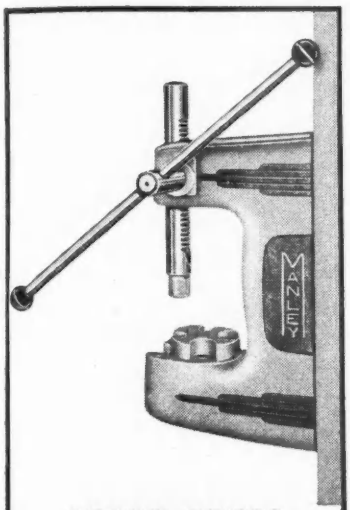
*Made with Du Pont "Dulux"

THE Permalux COMPANY

The best Decalcomania is none too good

500 RATHBONE AVENUE AURORA, ILL.

MANLEY AUTOMOTIVE SERVICE EQUIPMENT



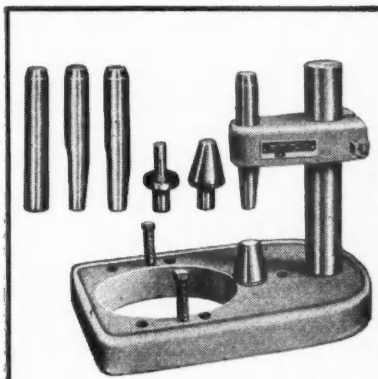
ARBOR PRESS

...3-ton capacity. May be had as accessory to any Manley Hydraulic Press of the HP series or for Bench, Wall, Post or Stand Mounting.



60-Ton Hydraulic Press

. . . with Movable Head • Adjustable handle works from any position • Table raising mechanism self-locking • Three speeds—0-15, 15-30, 30-60 ton pressures • Manley also offers 25-, 40- and 80-ton Hydraulic Presses.



RING GEAR RIVETER

. . . new and improved Model 45-W. Can be used for all passenger cars, most trucks and farm tractors.

The MANLEY line also includes Hydraulic Jacks, Wrecking Cranes, Floor Cranes, Engine Stands, Trestles—in all, 22 items for increasing the efficiency of automotive service shops. Get in touch with your Manley distributor.

ACCO

York, Pa. • Chicago • New York • Portland • San Francisco • Bridgeport, Conn.

MANLEY MANUFACTURING DIVISION
AMERICAN CHAIN & CABLE

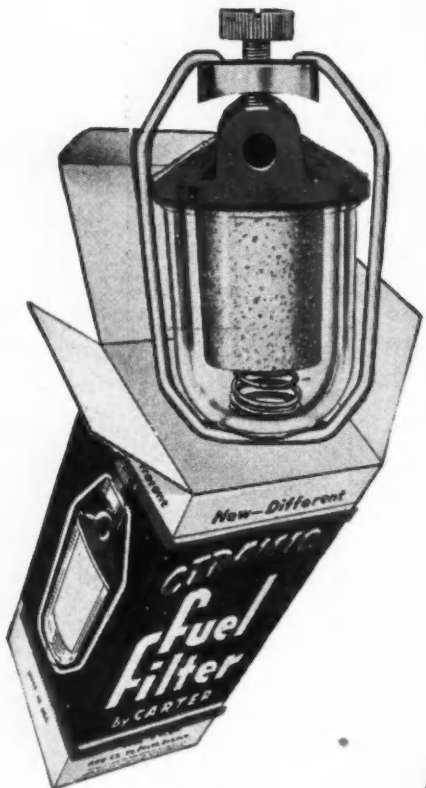
TRADE MARK

In Business for Your Safety



It will pay you to keep 'em *Clean*

with the CARTER CERAMIC FUEL FILTER



List Price, Ceramic Filter, $2.10

Selling protection against carbureter trouble is a highly profitable and goodwill building business.

Straining is not enough — the scientifically designed Carter element made of a specially prepared porcelain thoroughly filters the gasoline (removes particles as small as 1/25000 inch) providing a steady flow of fuel free from dirt, lint and other harmful matter.

CARBURETER

TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

CARTER CARBURETOR CORPORATION

St. Louis 7, Missouri

Division of American Car and Foundry Company



SPARK PLUG WIRE
FOR BETTER SERVICE

Belden *Automotive* **WIRE**

BATTERY CABLES · · · LIGHTING WIRES · · · SPARK PLUG WIRES

. . . and pH Built it!

This new Kelite pH Laboratory building (20,000 square feet) is a unit of the new Kelite Plant. This plant covers several acres situated within a few blocks of the Los Angeles City Hall, and is on the main line of the Union Pacific. Subsidiary companies located on the property are Tivit Products Company (steam cleaners and other cleaning equipment) and Kenu Products Company (cleaning products for the home). It is one of the most highly developed plants in the country devoted to the manufacture of cleaning and processing chemicals and equipment.

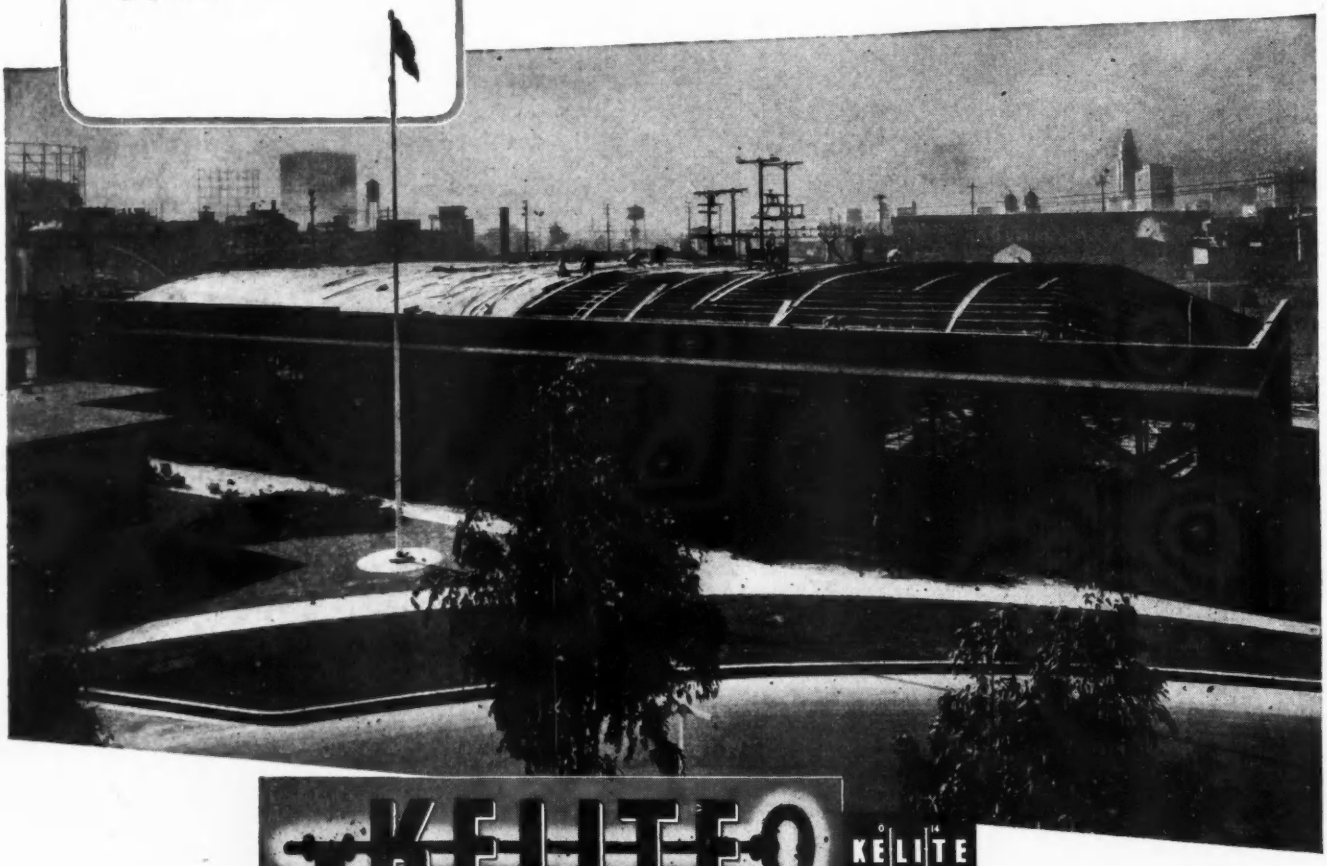
The "Priceless Ingredient" in *our* business is the confidence of our customers.

This new laboratory is a symbol of our purpose—to make every Kelite product so excellent in performance—that it will earn for Kelite your complete confidence.

Kelite pH Control introduced an entirely new concept into industrial cleaning and processing. Our thousands of customers are enthusiastic about the results which this control makes possible.

This year new thousands will learn about Kelite pH Control from Kelite Service Engineers They will see how this simple yardstick of cleaning efficiency eliminates guesswork... cuts costs...speeds operations...improves products.

There is a Kelite Service Engineer near you. His services are free. Just phone your nearest Kelite office—or write Kelite Products, Inc., Box 2917—Terminal Annex, Los Angeles 54, California.



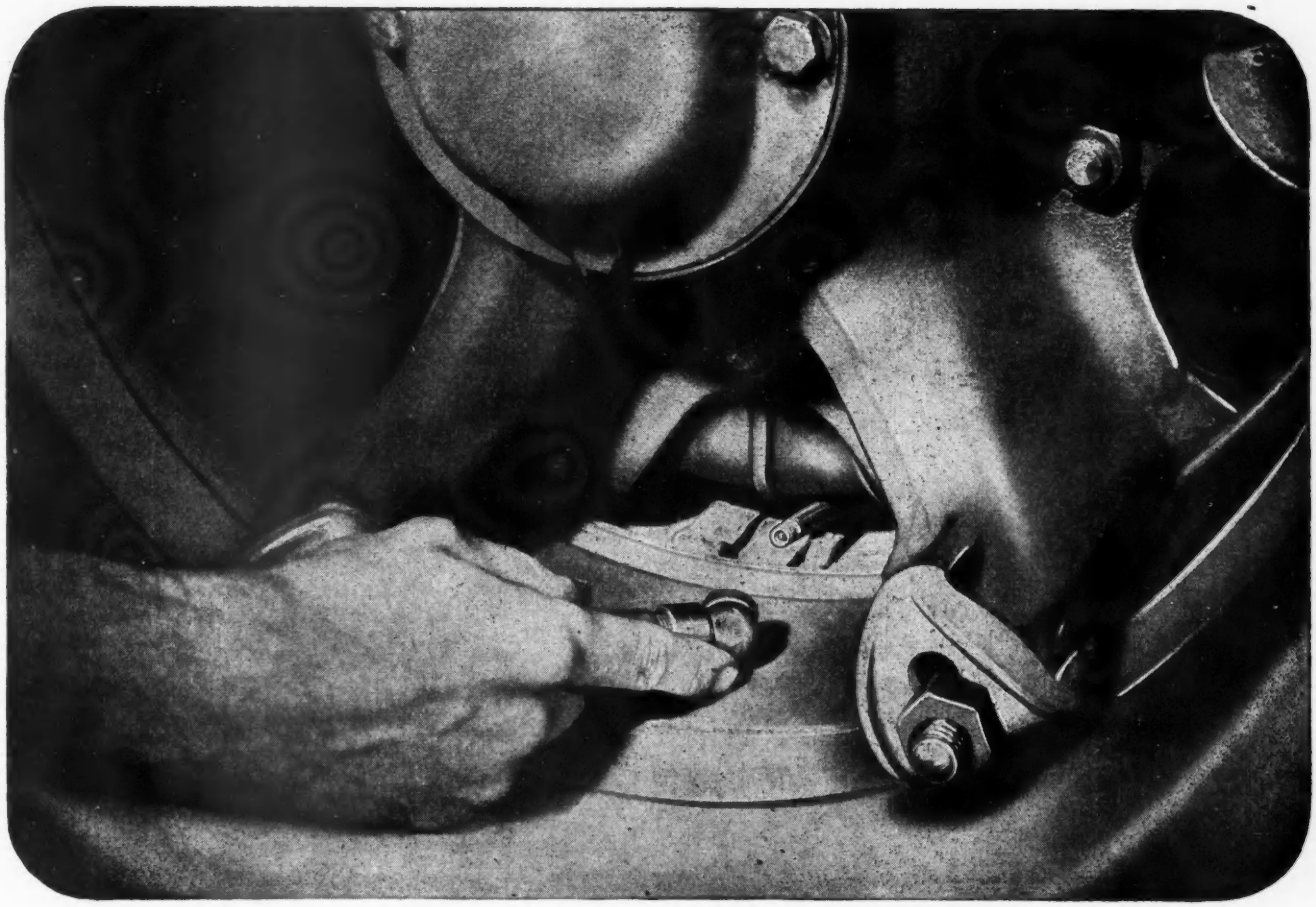
KELITE

SCIENTIFIC CLEANING THROUGH pH CONTROL



"Kelite" Reg. U. S. Pat. Off.—pH Chart copyrighted 1942 by Kelite Products, Inc.

Manufacturing plants in Los Angeles, Dallas, Chicago, Perth Amboy

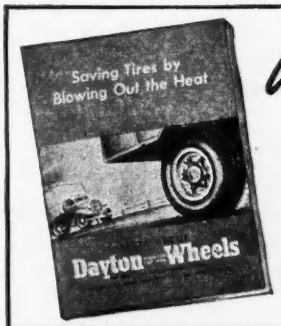


EASIER to inflate

There's plenty of elbow room to put an air chuck or gage on the valve stem of the inner tire on a Dayton Wheel. Maintenance of proper inflation is a quick, clean, simple job. A few seconds will air a tire or check the pressure.

This "elbow room" helps in other ways, too: it provides for air circulation that cools brake drums, linings, rims, and tires—makes them stand up longer—saves you money. These are a few details of Dayton Wheel design that make the name Dayton carry weight anywhere in the transportation industry.

THE DAYTON STEEL FOUNDRY CO., DAYTON 1, OHIO



Write for Bulletin!

The full story on why Dayton Wheels run as much as *47° cooler* is given in a new, interesting 12-page bulletin entitled, "Saving Tires by Blowing Out the Heat." Write for it today. No obligation, of course.

Dayton Steel products are serviced by distributor members of the National Wheel and Rim Association.

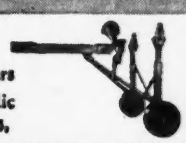
Dayton SPOKE TYPE CAST STEEL Wheels



Dayton Brake Drums
Drums assembled to the wheels at the factory give more perfect concentricity.



Dayton 5th Wheels
Standard equipment on many trailers. Quick coupling. Positive operation.



Dayton Landing Gears
Made in both hydraulic and mechanical types.



Outperforms *All* Competition in *every* test ever made

PUROLATOR PRODUCTS, INC.
NEWARK 2, N. J.

PUROLATOR
MICRONIC OIL FILTER
KEEPS OIL FREE FROM ABRASIVES

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"TONNAGE ENGINEERED" DARTS GET THE CALL!

When heavy machinery and equipment is to be moved in West Texas, The Panhandle, Oklahoma or Illinois-Indiana Oil fields, McAlister sends a DART "TONNAGE ENGINEERED" TANDEM to do the job.

The man behind the steering wheel (Hydraulic-Power-Steering, that is) doesn't hesitate when you ask, "What will your DART do?" He will tell you, "Anything I ask, and EASY too."

Operating EASE—Safety—Economy—Stamina—Power to Spare—all are factory engineered into a DART. That is why both owners and operators always say, "For a Tough Job, Give Me a TONNAGE ENGINEERED DART."

Dart TONNAGE ENGINEERED Trucks

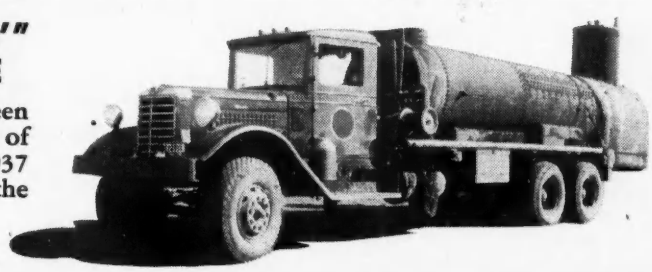
CONSULTATION WITH OUR ENGINEERS IS INVITED



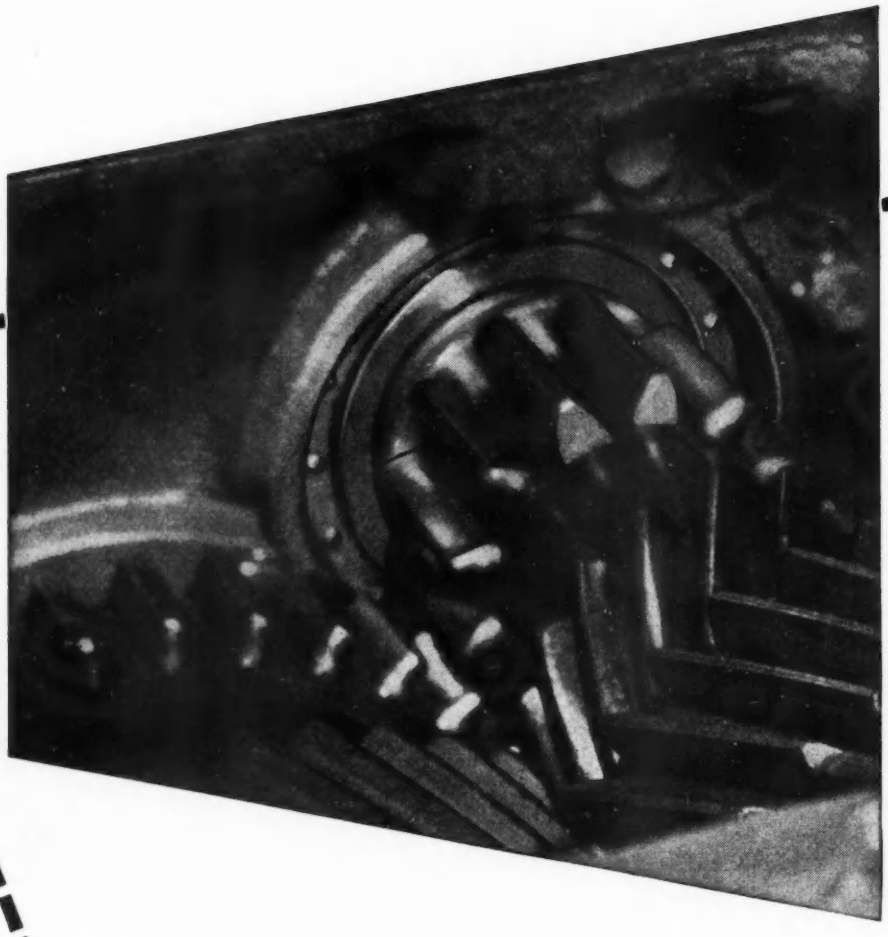
10 YEARS ON JOBS LIKE THIS

AND "RARIN'" FOR MORE

Old No. 8 has been getting this kind of treatment since 1937 and is still on the job daily.



DART TRUCK COMPANY • OAK AT 27th STREET • KANSAS CITY, MISSOURI



Shhh! These gears are quiet!

The smooth operation of quiet running bearings is helpful toward quiet transmissions. Such operation reduces the fatigue that may be attributable to a higher noise level. Quiet running SKF Bearings are synonymous with quiet transmissions . . . maintain the original setting of the gears . . . show practically no wear throughout a long life. This is an outstanding contribution to low mileage costs, on-time schedules, and customer satisfaction. Make sure of getting the *right bearings* when you specify bearings for replacement. Mention "SKF" by name. 6249

SKF INDUSTRIES, INC.
Front St. & Erie Ave., Phila. 32, Pa.

SKF

BALL AND ROLLER BEARINGS



A LOAD BEHIND IS A TRIP AHEAD

KINGHAM TRAILERS MEAN...

Contentment



That is exactly the way companies operating Kingham Universal Trailers feel, and have felt all through the years when performance on the road meant so much. These trailers keep going 24 hours a day, 7 days a week, 12 months a year . . . and they do it for more years than ever before known.

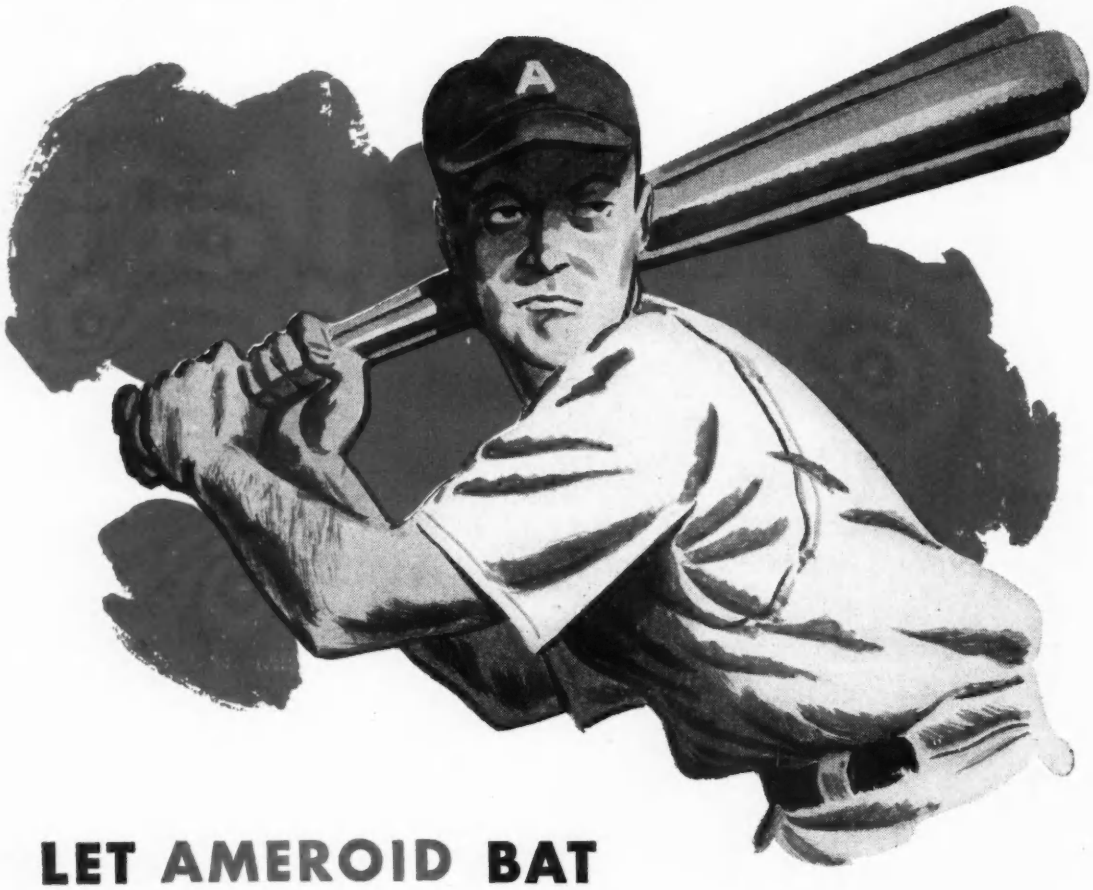
During the war when quick service and readily available repair parts meant so much to uninterrupted hauling, Kingham did an outstanding job in promptly providing this vital phase of trailer operation. It remains today, as then, one of the many Kingham ideals that guarantee operator CONTENTMENT.

Experienced operators know this, that's why they have always been content to wait for a Kingham Universal—*but now there is no long time waiting*—Kingham Trailers are available again—built to your order.

Kingham UNIVERSAL

NATIONAL SALES . . . NATIONAL SERVICE

KINGHAM TRAILER COMPANY • INCORPORATED • LOUISVILLE, KENTUCKY



LET AMEROID BAT "Clean up" FOR YOU!

Just as surely as the coming of Spring means the cry of "Play Ball!" throughout the land, it means "clean up time" to hundreds of fleet owners, more cleaning jobs of every kind for you. With Ameroid going to bat for you, you're sure of making a hit every time.



AMEROID DUOFOAM

Super-quick car-wash. One gallon cleans 128 cars. Leaves bright, lustrous finish without rubbing. Makes chrome, glass, sparkle. Removes all dirt, grit, grease and color-dulling traffic film.



AMEROID DUOSOL

Deluxe grease and oil remover. For motor blocks, bodies, springs, chassis, axles; excellent for cleaning garage floors, cement drives. Mixed with from 4 to 6 parts kerosene.



AMEROID CARBURETOR AND PARTS CLEANER

Quickly, easily removes hard carbon, gum, varnish from carburetors, pistons, spark plugs, exhaust pipes, motor blocks and small engine parts. Can be used over and over again.

E. F. DREW & CO., INC.

Automotive Products Division

15 East 26th Street, New York 10, N. Y.

Other offices in Boston, Chicago, San Francisco, Los Angeles, Dallas, St. Louis

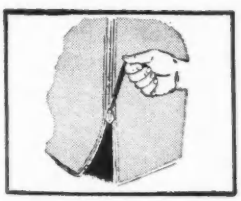
CARAVAN TOP

"Pickup" Versatility *Plus* "Panel" Protection

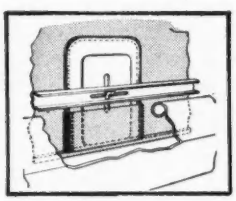


THE FRAME AND COVER FOR *ALL* DELIVERY SERVICES!

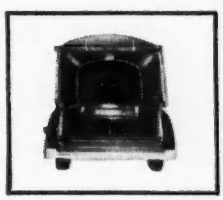
With Caravan Top, pickup truck owners have either "panel" truck protection or "pickup" versatility in a matter of minutes! Attaches with only 4 bolts; easily installed or removed by one man. Unlike makeshift "frame and tarp" contraptions, Caravan Top is lightweight but strong, with rigid aluminum frame, heavy weatherproofed duck cover. Maximum loading capacity for cargo or personnel. Sizes for all popular ½, ¾ and 1-ton pickups. Order from your supplier now for immediate delivery!



Two husky slide-fasteners open and close either side of rear curtain. Rolled up curtain is held by D-ring and hooks.



Adjustable tie-down plates provide tailored fit, hold cover tight. Cover hugs frame, eliminates flapping.



There are no protruding parts, brackets or braces on Caravan Top. Parts supporting cover are smooth.

Certified Turk Products

C. K. TURK CORPORATION SOUTH BEND INDIANA

• Bending • Bowing • Breakdown Balked!



Standard's NEW-ADAPTABLE-

Single Axle Spring Suspension

Makes Axle Assembly *Easier- More Economical*

Axle assembly is made easier and more economical by use of the new Standard Single Axle Spring Suspension. This amazing unit, whose adaptability allows free assembly of axles to either high- or low-frame trailers, is acclaimed by small and large trailer builders everywhere as "just what they've been looking for"!

Standard's straight-line set-up of springs and radius rods insures easy pulling without radius rod bending. Alignment of axles, with Inserted Spindles, is made without removing a single part!

Rated capacities of spring and helper spring are ample for maximum load and overload of the largest tire which may be used. Spring capacity increases with load increase when you use Standard's Single Axle Spring Suspension!

Hardened wear plates on spring hangers add longer life to the spring and hangers . . . prevent costly wear . . . and are simply and economically replaced. A unique design of spring seat cap assembly likewise prevents bowing or bending of the cap or clip bolts, thus eliminating brakedown and insuring trouble-free assembly or disassembly of your Standard Single Axle Spring Suspension!

Wire, Write Or Phone Today For Information On This New Product. EXPORT BRANCH 4900 Euclid Ave. Cleveland, Ohio
Phone: Henderson 0414 Cable Address: EXIMP C. O. Brandes, Mgr.

MANUFACTURED BY

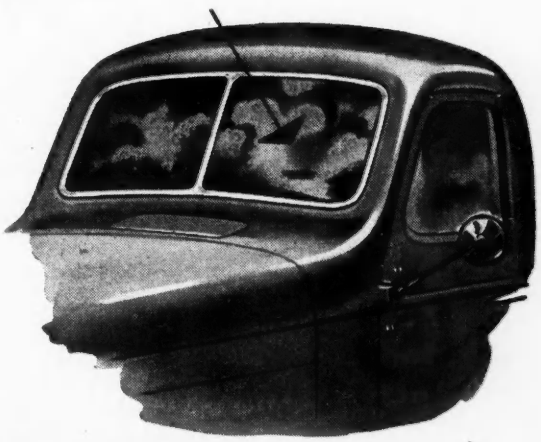
Standard Forge & Axle Company
INCORPORATED
MONTGOMERY 2, ALABAMA

AXLES BRAKES FORGINGS TRAILER PARTS

CHECK

FOR THIS SIGN OF DANGER

Be certain that your fleet is not endangered by cracked or discolored glass in windshields or windows. The surest way is to make glass inspection a regular step in your routine maintenance check.



Order replacement with genuine L·O·F HI-TEST SAFETY PLATE GLASS

CHECK

FOR THIS SIGN OF GREATER SAFETY

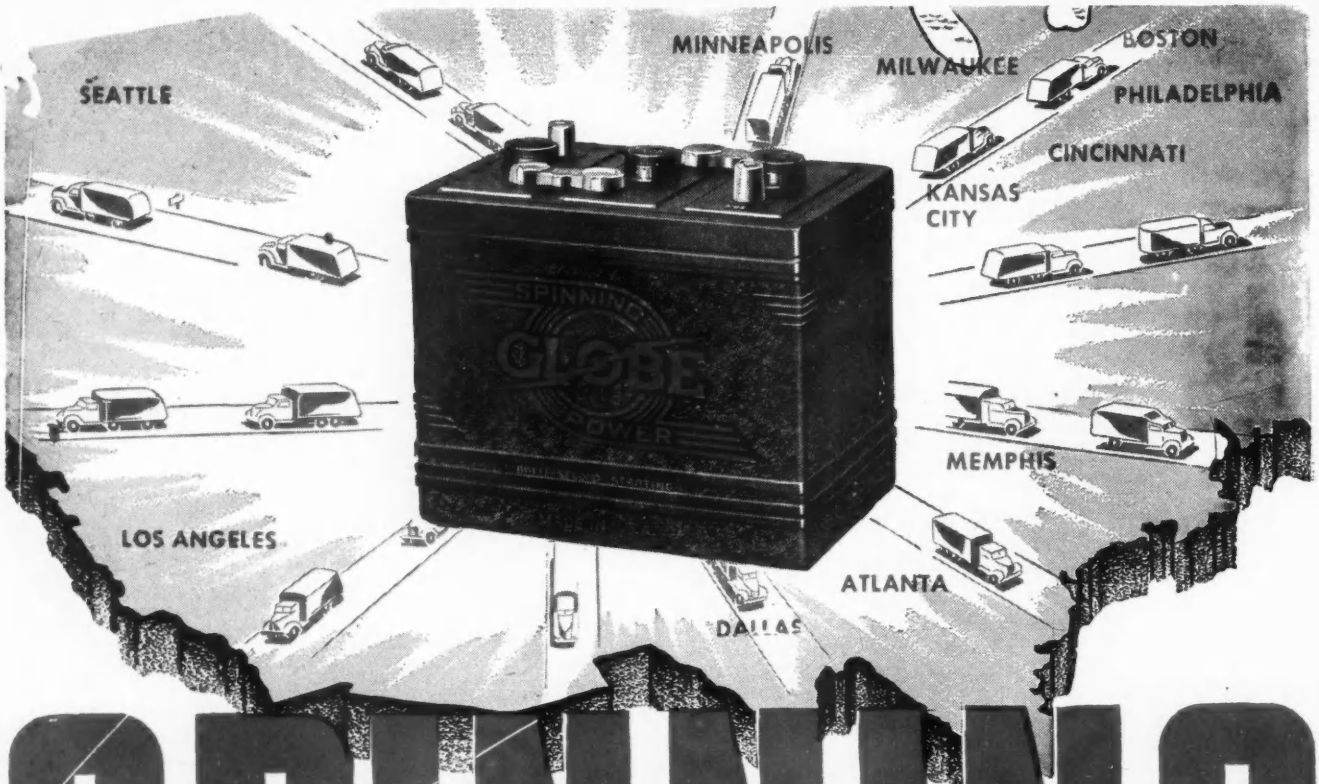
Be on the safe side. Make sure that the glass you get bears the stenciled identification "L·O·F Hi-Test Safety Plate". This symbol is your assurance that the glass has been made of two panes of L·O·F plate glass, ground and polished for freedom from distortion, and laminated with a sheet of clear, tough plastic. It means better seeing—greater safety. Libbey·Owens·Ford Glass Company, 5547 Nicholas Building, Toledo 3, O.



WHEREVER VISION IS IMPORTANT
USE L-O-F *Polished Plate* GLASS

L O F

LIBBEY·OWENS·FORD
a Great Name in **GLASS**

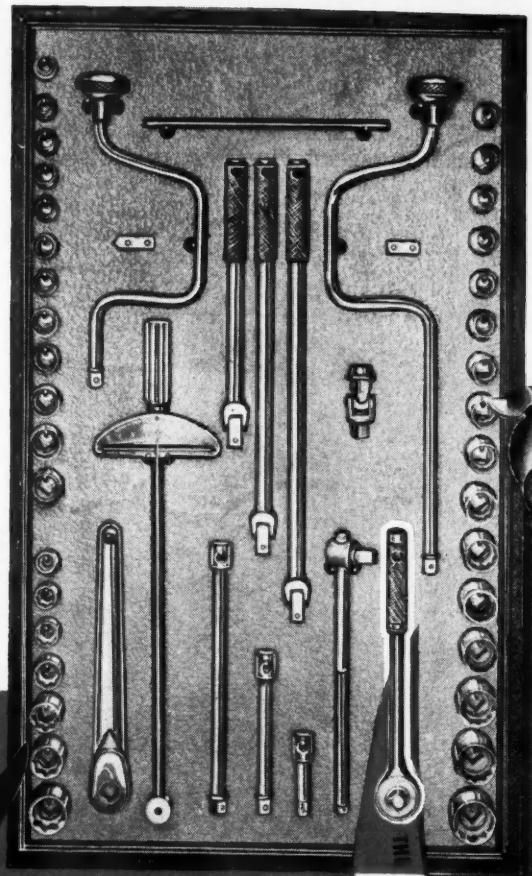


SPINNING POWER

Motors really move when Spinning Power says, "Get Going!" To keep your batteries active for extra service, be sure to check them carefully. Replacements are scarce. You'll lengthen battery life and avoid trouble by checking your batteries FREQUENTLY.

GLOBE-UNION

GLOBE-UNION INC.
MILWAUKEE 1, WISCONSIN



LOOK HERE!



for those "Doggone Good Tools",

. . . get DURO-CHROME MATCHED AND BALANCED TOOLS

Look for the DURO TOOL BOARD at your Jobbers. Thousands of new Duro-Chrome Tools are being delivered daily to Jobbers who display them on the Duro Tool Boards. So every time you visit your Jobber, take a minute to look over the Duro Tool Boards. You're sure to find tools that you have long been waiting for. You'll see that all of the Duro Tools have the satin-smooth, triple chrome skin that gives extra protection against rust and corrosion. You'll be able to feel the perfect balance built into every Duro-Chrome Tool that makes working with it a pleasure. Watch the DURO TOOL BOARDS at your Jobbers for those "Doggone Good Tools". DURO METAL PRODUCTS CO., 2649 North Kildare Ave., Chicago 39, Illinois.

THE NEW 80-TOOTH ACTION RATCHET WRENCH



The small sleek head gets into those hard-to-reach places and gives positive turns on as little as five degrees take-up. A flip of your finger reverses the action of this great tool. This is one of the new Duro-Chrome Tools you may find on the Duro Tool Board at your Jobbers. It will be the handiest all-around tool in your shop, a big time-saver, always in demand. It drives ¼", ⅜" and ½".

DURO TOOLS (HAND TOOL DIVISION)

The Mechanic's Best Friend

OVER A BILLION BUILT SINCE 1916

ALSO MAKERS OF DURO MACHINE TOOLS

2221

More WEAR-MILEAGE for Upholstery...

Specify TOLEX*



TOLEX Quality won't let you down! This plastic leathercloth is *super-tough*... backed by Textileather's 35 years of know-how and experience as a pioneer producer of leathercloth.

Extra long wear with Tolex upholstery means *lower cost!* Also, it's weather-proof... easy to clean... stain-proof... can be flame-proofed. Broad range of colors and effects. Specify Tolex upholstery for new equipment and replacement. Write for samples and more details. Textileather Corporation, Toledo, Ohio.



35 Years of Public Acceptance!

TEXTILEATHER*
NOT LEATHER

*Reg. U.S. Pat. Off.



"Young Man with a HORN"

What appears to be a glass saxophone in the hands of a Sinclair Laboratory technician is in reality an important instrument used in protecting you against lubricants with low resistance to oxidation.

It's part of Sinclair's apparatus to determine oxidation rate of both non-additive and additive type lubricants. It is used constantly by Sinclair in Research and Refinery Control to assure you of maximum lubricant life without formation of harmful corrosive acids, varnish or carbon deposits on working surfaces.

Resistance to Oxidation is a prime requisite of all good lubricants. Sinclair's "Young Man With A Horn" — and others equally painstaking — stand guard constantly at Sinclair Laboratories to assure you that any Sinclair Lubricant you buy has the very highest degree of quality necessary for maximum operating efficiency.

Sinclair Automotive Lubricants

For Engines:
OPALINE MOTOR OIL
OPALINE TBT MOTOR OIL
(For severe service)
TENOL (Heavy Duty — For Diesels)
For Gears:
OPALINE GEAR LUBRICANTS
For Chassis:
OPALINE CHASSIS LUBRICANT
For Wheel Bearings:
SINCOLUBE

SINCLAIR REFINING COMPANY • 630 FIFTH AVENUE, NEW YORK 20, N. Y.

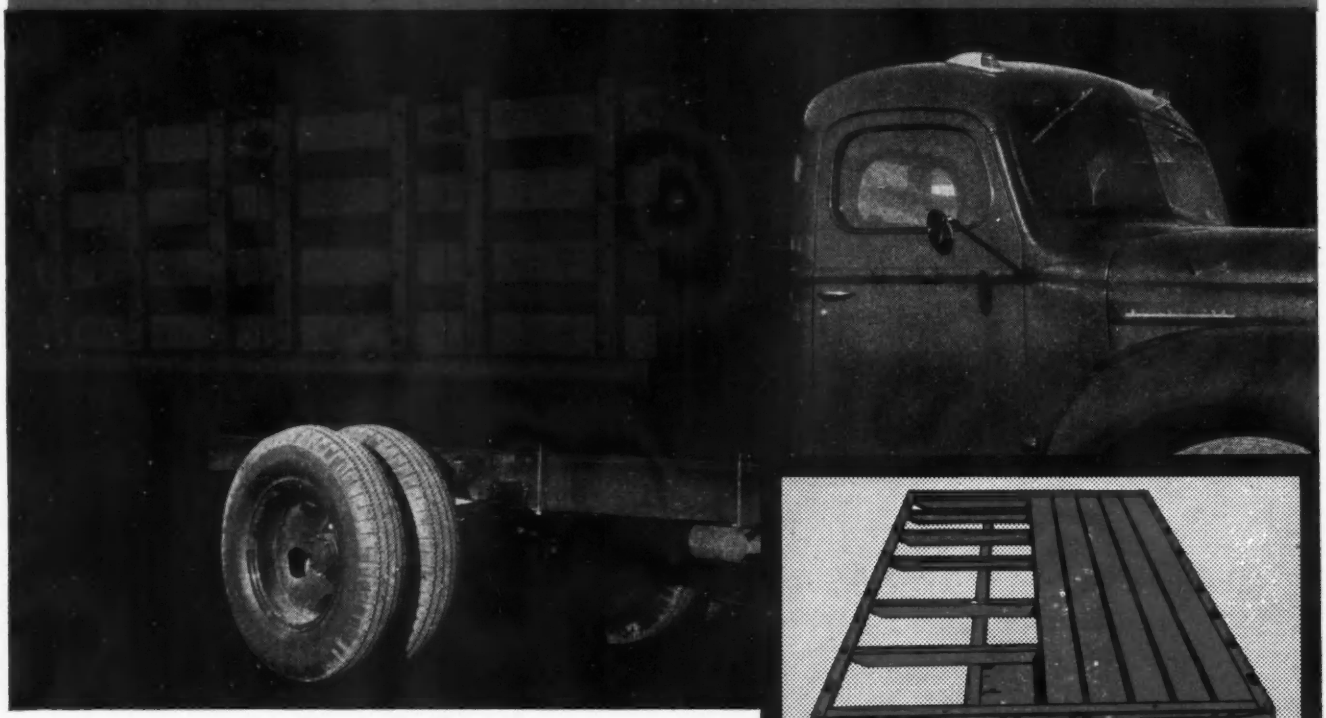
SINCLAIR

Lubricants for Industry

FINEST CRUDES + EXPERT RESEARCH and MANUFACTURING CONTROL = OUTSTANDING PERFORMANCE

200 Truck PLATFORMS AND RACKS

NOW AVAILABLE





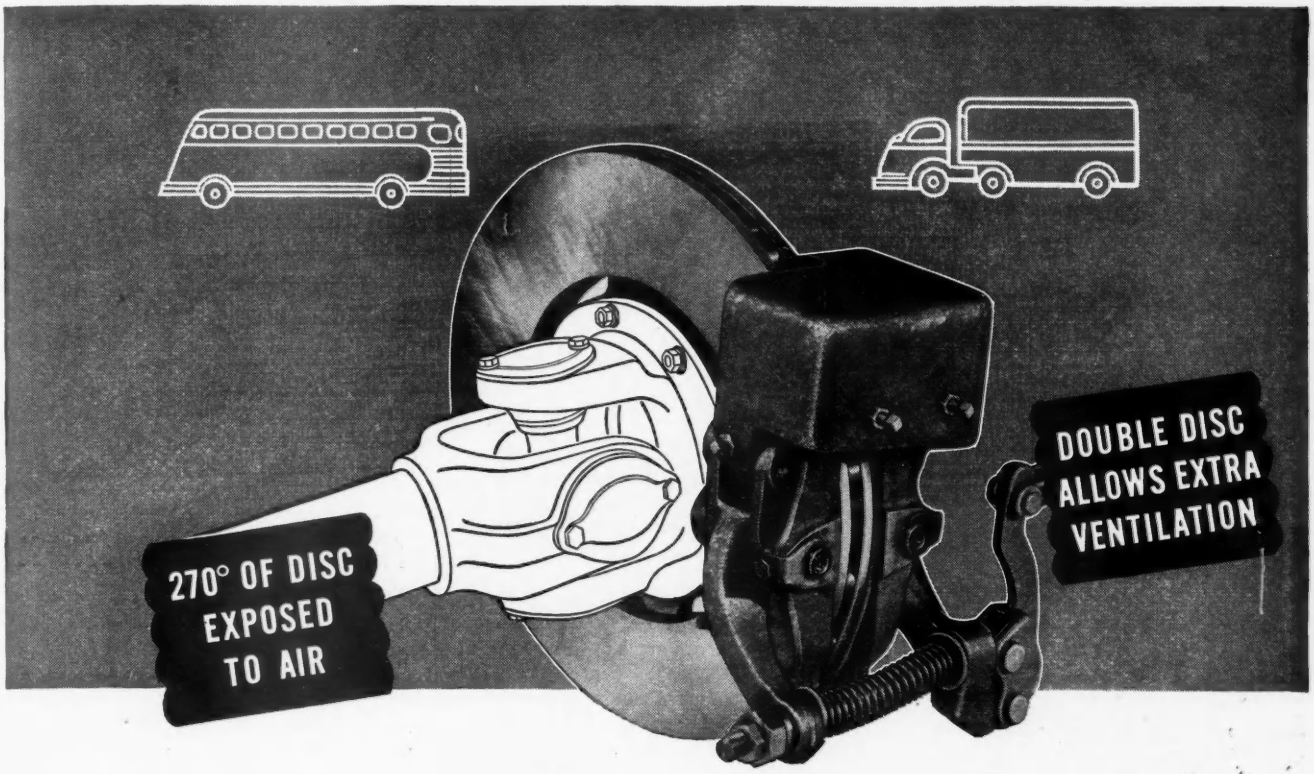
Here's the opportunity you have been waiting for—immediate delivery on Monroe Heavy Duty Truck Platforms and Racks! Welded high tensile strength steel construction insures up to 50% greater strength combined with lighter weight to enable you to carry more pay load per haul. They will out-last three or four trucks under normal trucking conditions. A 100% welded frame construction, with 8 inch sills. Bracing gusset-type 4 inch high tensile strength steel cross members which are welded to frame, assures maximum resistance to strain, stresses, and shock. Heavy hardwood plank platform treated to resist deterioration. Available with patterned steel floor plate for extra heavy use. Stake pockets protected in heavy side rails. Self-contained utility tool compartment. Open side, racks, tight side and combination racks available for all platform lengths. For complete particulars, call or visit your nearest Monroe dealer, or phone, wire or write our plant immediately.

LIST PRICES START AT **$152.00**

Here is the Monroe all steel, all welded frame construction that resists stress and strain of constant heavy hauling husky high tensile strength steel sills with gusset-type cross members. Note: seams of the platform planking are protected and reinforced with special steel moulding that makes them practically leak-proof for hauling grain and other loose material. Monroe platforms are manufactured in 9 foot, 12 foot, 14 foot and 16 foot lengths. (List prices start at $152.)

Monroe Truck Platforms

C. N. MONROE MANUFACTURING CO. • 2525 S. DORT HIGHWAY • FLINT 7, MICH. • PHONE 4-3625



IT'S NOT A REALLY MODERN BUS OR TRUCK IF IT HAS A PARKING BRAKE

Don't confuse parking brakes with real emergency brakes—engineered to decelerate, stop and hold the entire load. Specify TRU-STOP Emergency Brakes on new equipment and avoid the hazard of parking brake accidents.

DETROIT, MICH.—An emergency brake should be an independent braking system which can supplement or—in emergency—substitute for service brakes. TRU-STOP disc-type Emergency Brakes are engineered to do just that. And road tests have proved that they *will* do it—repeatedly.

The superiority of TRU-STOPS is due to their ventilated disc design. The quick, intense heat of braking is thrown off immediately, instead of being confined as in the ordinary drum-type brake.

TRU-STOPS are economical for two reasons. First, they give longer—much longer—service per lining. And, second, relining is a simple, inexpensive job which can usually be done by the driver himself. On a per-mile or per-stop basis, TRU-STOPS cost considerably less than the ordinary drum-type brake.

For complete information, write our Detroit office.

TRU-STOP Emergency BRAKES

ACCO

6-235 General Motors Bldg., Detroit 2 • 695 Bryant Street, San Francisco 7 • Bridgeport, Conn.

AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE

TRADE MARK

In Business for Your Safety

WALDEN • WORCESTER
Presents a New
STANDARD of STRENGTH
in socket wrenches



Above, Improved new WW design, cross section

Right, Conventional socket, cross section

Over 60% Stronger

PROVED BY LABORATORY TESTS

This new line of Walden-Worcester WW socket wrenches gains its greater strength from an improved method of manufacture, Force Forming.
Compression rather than the conventional cutting forms these sockets. This strengthens the steel, and avoids breaking the fibres, a major cause of tool failure.
A cold process, Force Forming retains all the alloying properties of the original triple alloy steel.
Sockets, clean and uniform, can be used to their full depth since space-wasting shoulders are eliminated.
Chrome plated and highly polished, all surfaces are satin smooth.
Write Dept. G for full information.

OVER 40 YEARS OF MASTER TOOLMAKING

WALDEN WRENCHES WORCESTER
STEVENS-WALDEN, INC.
Worcester • Massachusetts

CCJ Newscast

(CONTINUED FROM PAGE 254)

TANK TRUCK CARRIERS STUDY SHIPPING COSTS

In a move to effect a reduction in the cost of operation and in the cost to shippers in doing business with the tank truck operators, National Tank Truck Carriers, Inc., has established a Committee on Improvement of Operating Practices to make a study of the various factors in tank truck operations, the improvement of which would lead to a reduction in operating cost. Improved delivery and dispatch methods, safety regulations and exchange of information on operating practices, including maintenance, design and construction, are included among the subjects under study by this committee.

In addition the committee is deep into the question of uniform shipping papers since the continued practice of multiplicity in shipping papers is not only costly to the carriers but to shippers who do business with a large number of carriers in several sections of the country. Over 500 samples of shipping papers each different in many respects and currently in use by for-hire tank truck operators have been collected and analyzed in this study.

A tentative report has been made to the industry and conferences with shippers through a similar committee of the American Petroleum Institute have been going on. A final recommendation on uniform shipping papers can be expected before the close of this year.

Another study leading to the reduction of costs was started by NTTC's National Tank Truck Traffic Committee in a review of the rules and regulations contained in the various tariffs published by tank truck operators on interstate and intrastate traffic.

A preliminary compilation of the rules and regulations in but ninety interstate tariffs produced over 390 rules covering the twelve or fourteen generic subjects contained in the tariffs. Here again was a clear example of a costly weakness in carrier operations. Costly not only to the operator but to the shipper alike who must check rule after rule to ascertain just what service he is entitled to.

This proposed simplification and standardization of tariff rules has been met with wholehearted support by the I.C.C. and shippers.

STUDEBAKER TRUCK SALES UP

Studebaker, which followed its volume military truck production of the war with a new all-time record for civilian commercial vehicles in 1946 has begun 1947 at an even faster pace, R. G. Hudson, manager of the truck division, reported recently.

"Despite our share of the industry's production headaches last year," Hudson stated, "we are now providing widespread distribution of the company's line of commercial vehicles . . . and Studebaker dealers are expanding their parts and service facilities so that they can handle both truck and passenger car service in still greater volume."

(TURN TO PAGE 378, PLEASE)



WGB CLAROFICATION
Is Economy

WGB ClarOfiers and Cartridges cost less because they do more and do it longer. The ClarOfier is practically indestructible and every atom of the cartridge is essential to filtration — and the cartridge can be changed without tools.



There is a reason why such companies as Autocar and Mack Truck are using — and have used — ClarOfiers as standard equipment for years; the reason is the economy operators find with ClarOfier equipment.

This new 2-color book explains the construction, operation, and economies of clarofying oil for gas and Diesel engines. Write for a free copy.

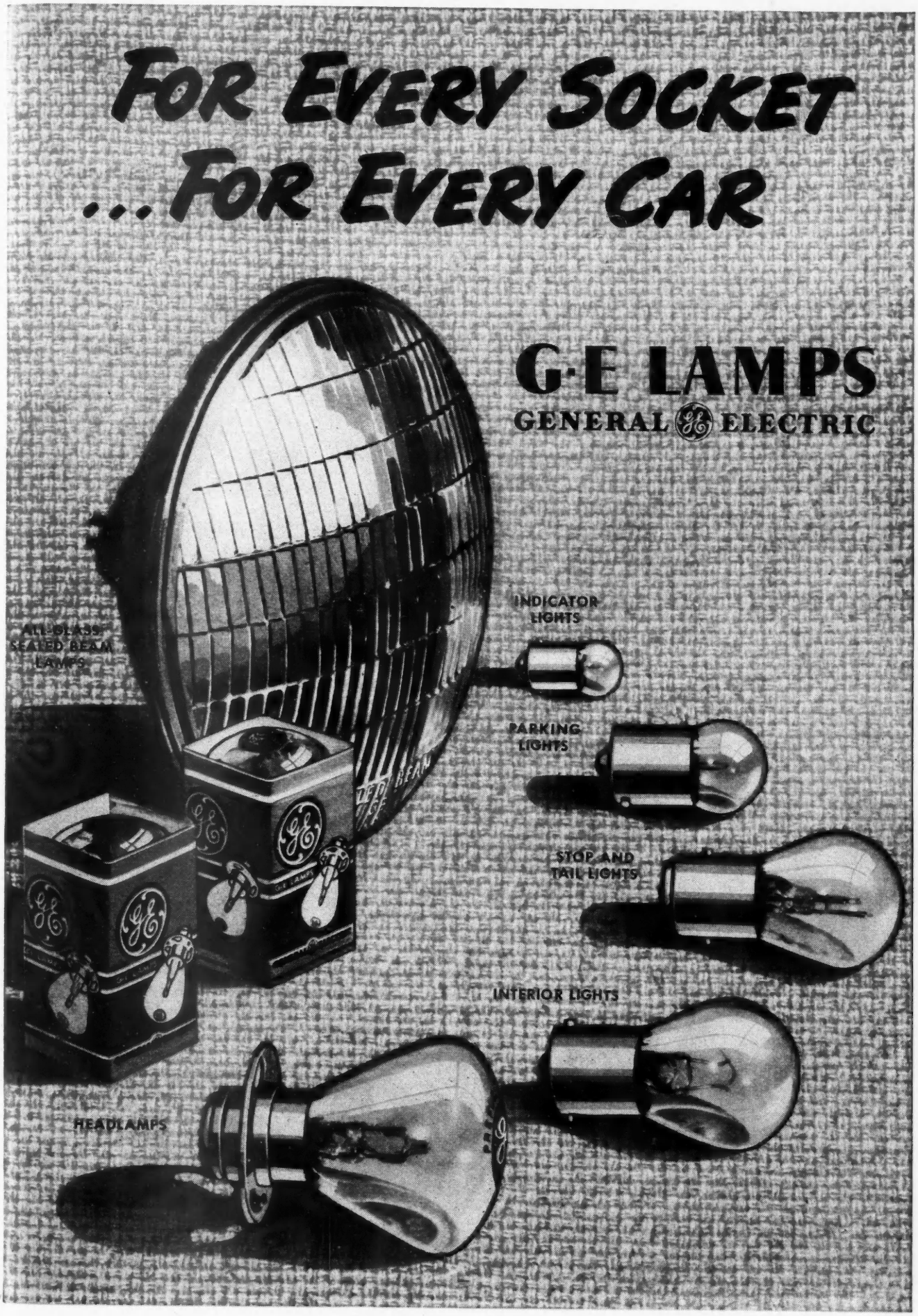


WGB
OIL CLARIFIER, INC.
KINGSTON, N. Y.

FOR EVERY SOCKET ... FOR EVERY CAR

G-E LAMPS

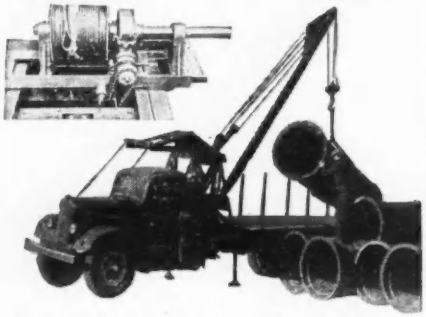
GENERAL ELECTRIC



SILENT HOIST & CRANE CO.
Pioneer Mfrs. of
Truck Winch & Crane Equipment

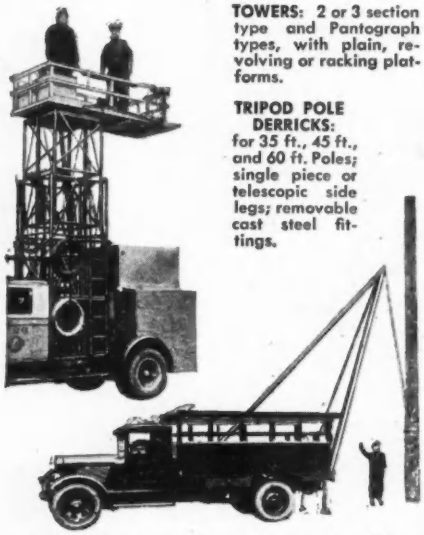
KRANE KAR Swing Boom Mobile Crane: for materials-handling . . . lifting, transporting, positioning, gasoline or Diesel, 1¼, 2½, 5 and 10 ton capacities, 9 to 37 ft. booms (or telescopic booms), solid or pneumatic tires. Self-stabilizing without jacks or outriggers; unobstructed vision; fast, flexible, safe, easy to operate.





WINCHES: Capstans; Single and Double Drum, Jaw Clutch, Keyed and Friction Clutch Winches. 2,000 to 50,000 lb. Capacities.

SWING BOOM CRANES: Truck: Motor Power Operated; high capacity; takes up only a small space. For handling transformers, cable reels, lamp posts, trees, poles, manhole castings, etc. 9 to 31 ft. booms; one to 10 ton capacities.



TOWERS: 2 or 3 section type and Pantograph types, with plain, revolving or racking platforms.

TRIPOD POLE DERRICKS: for 35 ft., 45 ft., and 60 ft. Poles; single piece or telescopic side legs; removable cast steel fittings.

USERS: AT&T; N. Y. Tel Co.; T.V.A.; Consolidated Edison Co.; W.U.; Municipalities throughout America.

WRITE FOR CATALOGS:

No. 58—KRANE KAR ***No. 60—Truck Equipment***

THE ORIGINAL SWING BOOM MOBILE CRANE WITH FRONT-WHEEL DRIVE AND REAR-WHEEL STEER

2½, 5, AND 10 TON CAPACITIES

KRANE KAR
TRADE MARK REGISTERED

SILENT HOIST & CRANE CO.
852 63rd ST., BROOKLYN 20, NEW YORK

CCJ Newscast

(CONTINUED FROM PAGE 376)

FORD COUPE CUT $20

A $20 cut in the price of the Ford deluxe six-cylinder, three-passenger business coupe, and its reinstatement in the Ford line, was announced recently by J. R. Davis, Ford Motor Co. vice-president and director of sales and advertising.

Mr. Davis said: "This price cut, together with reductions announced Jan. 15 on other models, gives Ford the lowest priced coupe and tudor sedan in its field." Mr. Davis revealed that orders for new Ford cars during 1946 surpassed all industry records.

Retail order in the hands of Ford dealers exceed a million and a half, and this is 62 per cent more than were on the books of Ford dealers a year ago. Mr. Davis believes that not more than 20 per cent of these orders are duplication.

HEADS OMAHA IHC BRANCH

International Harvester Co. has announced the establishment of a separate motor truck branch at Omaha, Neb. J. D. Richardson, who formerly was assistant manager of the company's local combination branch, will head the new branch. As manager of the Omaha motor truck branch, he will not only have complete charge of the local retail sales organization, but will also direct the extensive wholesale activities involving sales and service to International Harvester's motor truck dealers in the surrounding territory.

FRUEHAUF PERSONNEL SHIFTS

Fruehauf Trailer Co., Detroit, announces the appointment of R. B. Hollingsworth, formerly manager of Fruehauf's Richmond and Atlanta branches, as regional manager of the Southeast area, with headquarters in Atlanta.

Hollingsworth succeeds E. E. Springer, 20-year veteran of the Fruehauf orfianization, who is named manager of the company's new Florida branch, under construction at Jacksonville. Dozier L. Hood, former salesman at the Atlanta branch, is promoted to branch manager.

With the acquisition of the Carter Manufacturing Company and its branches in Memphis, Nashville and Birmingham, N. A. Carter, Jr., is appointed Fruehauf-Carter regional manager covering the mid-South area.

PICKARD NAMED TO FWD

Samuel N. Pickard, president of the National Mfrs. Bank of Neenah, has been named a director of the Four Wheel Drive Auto Co. Mr. Pickard replaces Antone Kuckuk of Shawano who died October 4 and who had been a member of the Board since 1914. His term on the Board of Directors will run until the next annual stockholders' meeting.

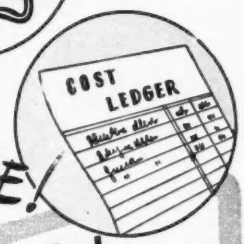
Mr. Pickard was President of the Wisconsin Bankers Association from 1938 to 1939 and is a member of the executive council of the American Bankers Association.

(TURN TO PAGE 380, PLEASE)

VENTALARM *makes a Difference*



HERE



and HERE!

- No Blow-backs!
- No Over-Filling!
- No Spillage DUE TO TEMPERATURE EXPANSION!
- No "Splash Filling"!

As a fleet operator, watch these major cost factors disappear through the use of **VENTALARM*** ***-equipped tanks.***

VENTALARM stops the waste of spilled gasoline, eliminates time-consuming "dribble filling". JUST FILL AT FULL SPEED 'TIL THE WHISTLE STOPS! **VENTALARM** cuts out losses caused by splash filling, corrects the hazard of gasoline-soaked floors. No chance for spillage or overflow caused by temperature expansion.

Twelve makes of buses, trucks, and taxicabs now include **VENTALARM** as standard factory equipment.

For fast-filling, non-spilling efficiency, specify the **VENTALARM** Fill Signal on the tanks of your new vehicles. You'll see the difference in time and money saved.

*T. M. Reg. U. S. Pat. Off.

SCULLY SIGNAL COMPANY
Cambridge 41, Massachusetts

VENTALARM
GAS TANK FILL SIGNAL



This One Will Make Your Trucks Earn More Money for You

It's the Thornton 4-rear-wheel Drive. It converts medium trucks into heavy-duty haulers in every way but cost!

Trucks with a normal G.V.W. of 15,000 to 16,000 lbs. are converted into big, powerful six-wheelers with a G.V.W. rating of 26,000 to 32,000 lbs. as a truck . . . 42,000 to 44,000 lbs. as a tractor.

More than that, the Thornton 4-rear-wheel Drive is a conversion unit that's built to stand up under all kinds of trucking operations. That means your trucks can haul heavier loads on paved highways . . . on rough side roads . . . or even where there are no roads at all.



The Thornton 4-rear-wheel Drive provides two driving axles instead of one. You get a two-speed gear case assembly equipped with the famous NoSPIN Differential that gives full driving power to all rear wheels. The NoSPIN Differential is automatic-locking! When installed in each of the two driving axles, it prevents wheel-spin, since rear wheels *must* rotate when power is applied.

You also get "walking-beam" type springs, additional wheels and tires, necessary frame reinforcements, and attaching parts.

THE NoSPIN DIFFERENTIAL used in the Thornton 4-rear-wheel Drive will also increase the efficiency of your *4-wheel* trucks. Fits virtually any driving axle. Prevents wheel-spin . . . keeps your truck from stalling in mud, muck, sand and snow . . . on ice or on slippery roads.

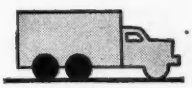
So isn't it a foregone conclusion that this time-proved conversion unit can make your trucks earn more money for you?

Call your truck dealer or local Truckstell distributor for complete information on this BIG idea. Or write The Truckstell Company, Union Commerce Bldg., Cleveland 14, Ohio.

THORNTON 4-REAR-WHEEL DRIVE

Converts a Medium-duty Truck

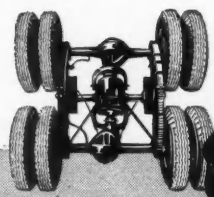




. . . into a Big, Powerful Six-Wheeler

RESULT: 100% More Payload

100% More Tractive Effort



THORNTON 4 REAR WHEEL DRIVE

Approved AND DISTRIBUTED BY TRUCKSTELL
SPECIALIZED EQUIPMENT FOR PLUS PERFORMANCE

Manufactured by **DETROIT AUTOMOTIVE PRODUCTS CORP.** *(Formerly Thornton Tandem Company)* **Detroit, Michigan**

YOU'LL do better with WEL-EVER!

You'll do better 3 ways with a Wel-Ever "H" Set in any truck!

1. A Better Job

Power-packed and oil-thrifty, "H" Sets get the nod for performance ALL THE WAY . . . they can take it and dish it out, cross-town or cross-country!

2. Better Mileage

"H" Sets get you there and get you back . . . ON TIME! Precision-engineered from casting to carton for stamina, power and fuel economy.

3. Better Installation Time

"H" Sets save labor and labor cost on installation because easily, quickly installed. Free-running, they require no "breaking-in" period.



Why be satisfied with less than "H" Set performance? Ask your jobber or write The Wel-Ever Piston Ring Co., Toledo, Ohio.

RE-RING WITH H PISTON RING Sets

The WEL-EVER Line

CCJ Newscast

(CONTINUED FROM PAGE 378)

LONGENECKER POST

Ellis T. Longenecker, former federal manager of seized motor carriers under the Office of Defense Transportation, has been appointed general manager of Pacific Freight Lines, Pacific Freight Lines Express and Pacific Tank Lines. Mr. Longenecker recently resigned from a district supervisorship in the Interstate Commerce Commission.

NAMED TO HERBRAND

S. A. Fryett has been appointed New England representative for The Herbrand Corp. of Fremont, Ohio, manufacturers of drop forge tools and forgings. Mr. Fryett's territory includes Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut.

FRANKLIN APPOINTMENT

The appointment of C. W. Dalzell of West Caldwell, N. J., as chief engineer of the Franklin Transformer Mfg. Co., Minneapolis, has been announced. Mr. Dalzell replaces R. L. Anderson.

NEW DISTRICT MANAGER

Kennametal, Inc., Latrobe, Pa., announces appointment of Lawrence W. Guild as manager of a new district in New England comprising territories covered by the Kennametal Hartford, Springfield, and Boston offices. Mr. Guild has served Kennametal, Inc., for several years as a representative and tool engineer. His headquarters will be at the Springfield, Mass., office.

HYCON APPOINTMENTS

The New York Air Brake Co., has announced the following appointments to the *Hycon* Division:

Western District Sales Representative: William M. Smith; Midwestern District Sales Representative: Stanley R. Holliday; Eastern District Sales Representative: Joseph A. Schreiner; Southwestern District Sales Representatives: L. D. Tuttle Co., Dallas; Southeastern District Sales Representatives: L. D. Tuttle Co., Atlanta.

GENERAL SHOWS 21% GAIN

The General Tire & Rubber Co. has announced net sales for 1946 as being the greatest in the company's history . . . 21.57 per cent higher than its peak wartime sales level. The company reported net sales of $105,883,559.25, which is $18,788,448.31 above the previous high reached in 1945.

MEDIUM DUTY POWER RELAY CATALOG No. 6, featuring medium duty power relays together with other pertinent information regarding the selection of relays, operating characteristics, contact circuit arrangements and contact ratings is available from Signal Engineering & Mfg. Co., 154 W. 14th St., New York, N. Y.

(TURN TO PAGE 382, PLEASE)

HALLOWELL

TOOL STANDS OF STEEL

HELP YOU KEEP YOUR TOOLS WITH YOU . . .

ALWAYS HANDY TO THE JOB



Fig. 1855

These "Hallowell" Tool Stands—built of sturdy, welded, all-steel and equipped with free-rolling casters—enable you to keep your tools with you as you move from job to job . . . provide long, trouble-free service . . . and can be locked to protect your tools. They are available with two drawers as illustrated above . . . with one drawer . . . or without drawers, depending on your needs.



Fig. 2197

"Hallowell" Foreman's Desk of Steel Is Another Time-Saver

Of stand-up height, it can be used to advantage throughout your shop . . . and it enables your foreman to keep his cards, records and other information in a convenient place, always at his finger tips for ready reference. Top is sloped at convenient angle and has a flat, smooth writing surface. Many other styles are available to meet your specific requirements.

For details about these, and other time- and labor-saving products, write for "Hallowell" Catalog of Shop Equipment of Steel.

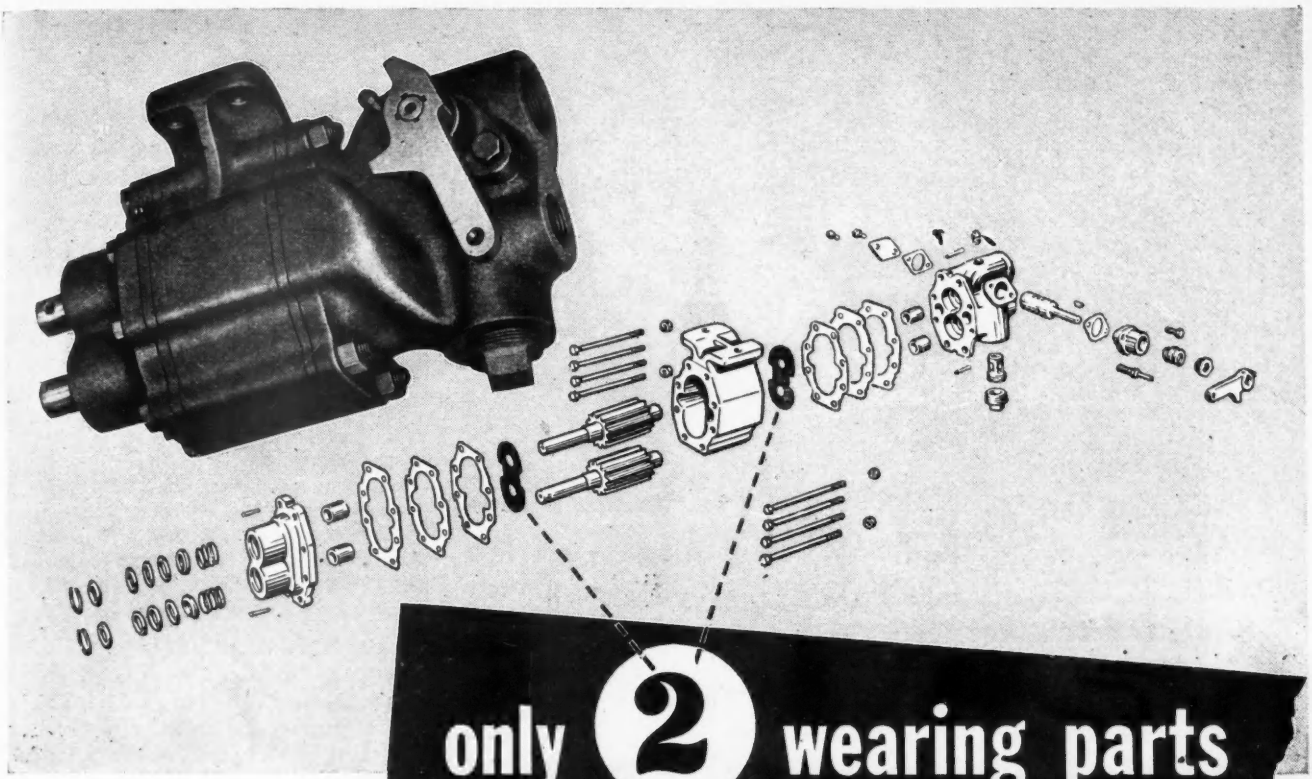
"Unbrako" and "Hallowell" Products are sold entirely through distributors.

OVER 44 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

BOX 747 JENKINTOWN, PA.

***Branches:* Boston, Chicago, Detroit Indianapolis, St. Louis, San Francisco**



only 2 wearing parts in this pump ... and they are reversible and easily replaced

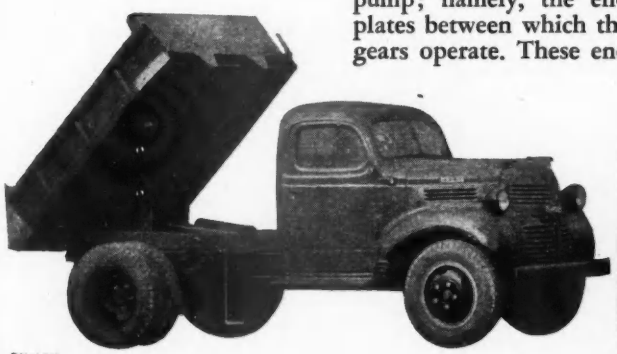
...another reason why you can rely on Heil Hydraulic Dump Units for greater profits

The heart of any hydraulic system is its pump. That is why Heil oil-gear pumps for Heil Dump Units are designed to provide the utmost safety and dependability. They are the product of years of engineering research and manufacturing experience. Nothing has been left to chance.

Look inside a Heil Pump and you see hardened and ground steel gears machined to very close tolerances. The use of these precision-made parts automatically means longer life. In addition, the gears run in an oil bath. Actually there are only two wearing parts in the pump; namely, the end plates between which the gears operate. These end plates are designed so that they can be reversed. They also are easily replaceable.

Each pump is tested before release, and must handle 10 gallons per minute. Yes, the care taken in the design and manufacture of these pumps is just one of the reasons why Heil Dump Units stay on the job faithfully, year in and year out — why they can raise loads as heavy as 24 tons to a 50° dumping angle in 10 or 15 seconds.

When you use Heil Dump Units, your trucks dump faster, make more trips, and require less maintenance. That is why Heil owners enjoy greater profits. Call on your nearest Heil distributor for additional reasons why Heil Dump Units are your best investment. Send for bulletins.



BH-125

THE HEIL CO.

GENERAL OFFICES • MILWAUKEE 1, WISCONSIN



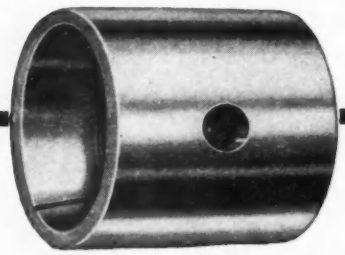
BRAKE PARTS
BRAKE CABLES
BRAKE TOOLS
BRAKE FLUID

EIS literature is the most complete of its kind. And like EIS Products is recognized as "Standard" in the field of brake parts replacement.

THE EIS AUTOMOTIVE CORP. — THE LINE OF DEPENDABLE SERVICE

From your jobber. Write us for full particulars

THE EIS AUTOMOTIVE CORP.
MIDDLETOWN, CONN.



Announcing a New Line of

"PERFECT" BUSHINGS

CON ROD AND PISTON PIN

(SPLIT AND SOLID TYPES)

DO not confuse "Perfect" Split Type Bushings with ordinary types. These bushings are all-bronze, tite-seam, of exceptional strength and durability. Made to the highest precision standards for replacement. Identical with factory equipment.

NOTE THESE 3 ADVANTAGES

1—Easier to ream because ream stock is reduced to a minimum.
2—Tailor made for easy application.
3—They save valuable time in fitting. When you save time you save money.

IMMEDIATE DELIVERIES

From your jobber or write us for full particulars

PERFECT PARTS, INC.
53 Amsterdam Ave., New York 23, N. Y.

CCJ Newscast

(CONTINUED FROM PAGE 380)

SURPLUS VEHICLES DOWN 10%

Prices of surplus used motor vehicles, including all types of used passenger cars, trucks and trailers, are being reduced 10 per cent under a revised disposal program.

The price reduction, War Assets Administration explained, is designed to meet new market conditions and to accelerate the high rate of disposal achieved in recent months.

January motor vehicle disposals totaled 28,285, substantially more than the monthly average of about 20,000 vehicles. Total disposals in February numbered 21,210 vehicles. Trucks led all types of vehicles sold both months, totaling 12,296 in January and 11,832 in February. Many types of motor vehicles and trailers, all in various degrees of usefulness, made up the remainder of the disposals.

CARRIERS SHOW INCREASE

Expenses accounted for 96.1 per cent of the gross revenue of Class I motor carriers of property during 1946, leaving less than four cents net on each gross revenue dollar, before payment of income taxes.

A study compiled and released recently by the Department of Research, American Trucking Associations, Inc., showed net revenues improved by comparison with 1945—the worst year in the trucking industry's history from a profit standpoint—when expenses took 99.0 per cent of gross revenues, thus leaving only one cent of profit per dollar of gross before income taxes.

W. A. Bresnahan, ATA's Research Director, pointed out that the 96.1 per cent expense figure for 1946 still is higher than pre-war expense levels, and can be considered only as an indication that the Class I carriers have made some progress toward recovery from the financially-lean war years.

Expenses:

	1946	*1945*
Equipment Maintenance and Garage Expense	14.8%	16.7%
Transportation Expense	28.1%	29.1%
Terminal Expense	18.6%	17.6%
Sales, Tariffs & Advertising Expense	2.3%	2.3%
Insurance & Safety Expense	5.4%	5.4%
Administrative & General Expense	8.6%	9.3%
Depreciation Expense	3.5%	3.7%
Operating Taxes & Licenses	6.0%	6.4%
Operating Rents—Net	8.8%	8.5%
Total Expenses	96.1%	99.0%
Net Operating Revenue Before Income Taxes	3.9%	1.0%

IMPROVED TIRE REPAIR

New and improved methods of repairing tread cuts—one of the most common types of injury encountered in the operation of truck and off-the-road tires—is announced by The Goodyear Tire & Rubber Co.

According to B. C. Eberhard, manager

(TURN TO PAGE 384, PLEASE)

How Joseph J. Vinci Maintains Outstanding Truck Performance

"ALL last year, I can't remember having to add one drop of oil between changes," reports Joseph J. Vinci, president of the J. J. Vinci Coal Company, Middletown, Conn.

"And last year, we got much more than the usual 75,000 miles from our units before we had to turn down the crankshafts or put in new inserts and mains.

"We got rid of our oil pump troubles, too. Our pumps aren't crowded with sludge, the way they used to be. Our motors are clean all the way through.

"How come? Well, because about a year ago, we switched to Gulf Dieselube H.D. We were having plenty of trouble with our old oil—and were hauling only 8 or 9 tons, as against the 14 or 15 tons we now haul with Gulf Dieselube.

"Now, when we pull out the stick at the end of a 135-140 mile run with coal or trap rock, we find the oil still up to the 'full' mark."

Supervises Shop Work Himself

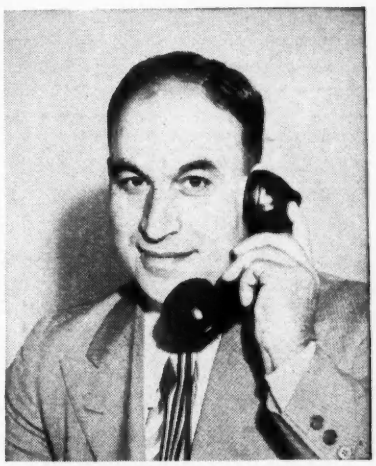
"Two weeks ago, we pulled one motor down after 55,000 miles on Gulf Dieselube.

"We found the main and connecting rod bearings worn very little. The rings were free, valves and screens were very clean.

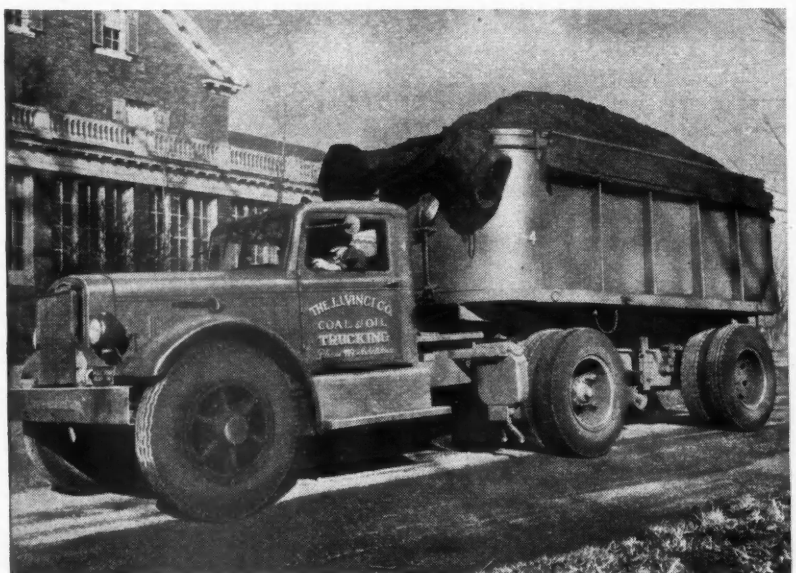
"Our trucks are really pounding around, and still we never had one breakdown due to lubrication failure all last year.

"I supervise our shop work, and can tell you what goes in and comes out of our motors.

"Take it from me, the detergent in Gulf Dieselube H.D. really does a job in keeping motors clean and operating smoothly."



He knows what goes in and out!



• Averaging 250-275 miles per day, J. J. Vinci's Coal Company trucks haul some of the toughest loads in the business, coal and trap rock—are all 6 or 7 years old. Still these trucks have never had one breakdown due to lubrication failure since using Gulf Dieselube H.D.

• • •

An offer from Gulf

Here's a chance to have your fleet inspected by a trained Automotive Engineer.

Yes, we'll arrange to have a Gulf Automotive Engineer consult with you, free of charge.

He'll tell you if and how Gulf Dieselube H.D. can make your operation more efficient.

Just write the Gulf Oil Corporation, Gulf Building, Pittsburgh 30, Pa. and we'll see that an engineer calls on you whenever it's convenient for you.

GULF

Use GULF DIESELUBE H.D.

For automotive Diesel engines and gasoline engines in heavy-duty service


Truck Mounting of Snyder Saddle Tank

SAFETY SNYDER TANKS

Most Popular Safety Equipment In The Trucking Industry

Some Reasons Why!

1. 100% lapwelded construction.
2. Uniform strength throughout.
3. Equipped with Flame Guard Safety Valve. (Trade Mark No. 409422.)
4. New Fusible Filler Caps.
5. Slip Proof Deck Plate.
6. Designed to fold with a crash.
7. Approved by the Underwriters Laboratories, Inc.

Patent Numbers 2181772 - 2273737 - 2389168. Others pending. Also foreign patents.

When You Buy a Tank Buy "Snyder." For Catalog and Address of Your Nearest Distributor, Write:

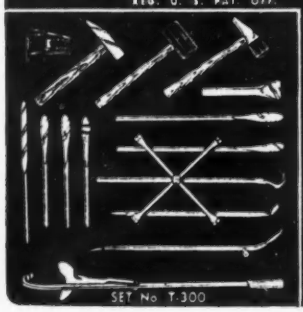
SNYDER TANK CORPORATION

P. O. Box 14, Buffalo 5, N. Y.

SNYDER TANK CORPORATION P. O. Box 2390, Birmingham, Ala.

KEN TIRE TOOLS

REG. U. S. PAT. OFF.



LEAD THE FIELD • ADVANCED DESIGN • QUALITY UNSURPASSED • SEE YOUR LOCAL JOBBER OR WRITE FOR LITERATURE •

KEN TOOL MFG. CO. AKRON 5, OHIO

SET No. T-300

CCJ Newscast

(CONTINUED FROM PAGE 382)

of tube and accessory development for the company, shallow tread cuts which do not penetrate into the fabric plies are not particularly detrimental to the life of a tire. The real danger, however, results from stones, gravel, other foreign objects that become wedged in the cut and continue to work into or through the tire by forces of tread flexing and road impact.

The new method, said Mr. Eberhard, simply involves probing the cut to remove all foreign material, then by use of a sharp pointed knife or rasp, trimming out or grinding around the cut to form a cone-shaped cavity to extend to the bottom of cut. After the cuts have been trimmed out, the tires can be continued in service without danger of impairment of service life or extension of the cut. Full advantage of this method of treating shallow cuts can be realized through frequent inspection of tires to remove stones, glass, and other foreign substances, and detection of the deeper, more serious cuts which require early vulcanized repairs to insure the operator obtaining maximum service life from tires.

Mr. Eberhard emphasized that, in probing the tire, the angle of the skive or bevel should be no more than required (30 to 45 deg.), to prevent future wedging of foreign material in the cavity, and must not extend in depth beyond the breaker. Heretofore, said Mr. Eberhard, it was recommended that all shallow tread cuts be vulcanized.

(TURN TO PAGE 386, PLEASE)

KINNEAR *Rolling Doors*



On truck bodies *or* buildings, Kinnear Doors are efficient, dependable, economical. Steel-slat curtain coils upward, out of way. Any size; motor operation if desired. Write for details.

THE Kinnear Manufacturing Company
2100-20 Fields Avenue, Columbus 16, Ohio

***Available* Trucks**

1½ TO 20 TONS
TRUCKS • TRACTORS
TRAILERS • BUSES
(SINCE 1910)
TELEPHONE—BRUNSWICK 1100
AVAILABLE TRUCK CO.
2501 ELSTON AVE.—CHICAGO 47, ILL.

MOHAWK TIRES

and Recapping Materials are both GOOD

The
Mohawk Rubber Co., Akron 5, Ohio

***Water* Pumps**



for FORD DODGE PLYMOUTH
for BUICK CHEVROLET OLDSMOBILE
all late models

Wohlert CORPORATION

LANSING 5 MICHIGAN



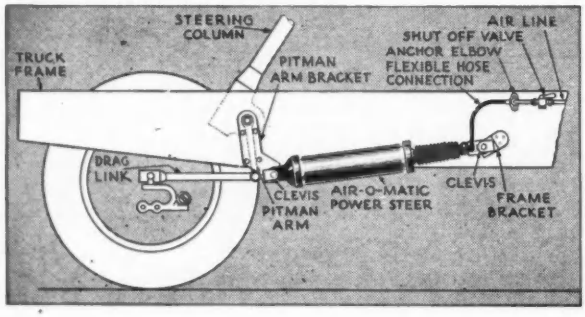
OVER 70% OF ALL MAKES OF TRUCKS AND BUSES ARE *Zollner* EQUIPPED

ZOLLNER

HEAVY DUTY PISTONS

ZOLLNER MACHINE WORKS FORT WAYNE IND.

EASIER STEERING FOR TRUCKS AND BUSES with



AIR-O-MATIC POWER STEER.....

The Air-O-Matic Power Steer is a compact self-contained booster or helper of simple construction, operated by air. It can be readily attached to any truck, bus, motor crane, etc., whether new or old.

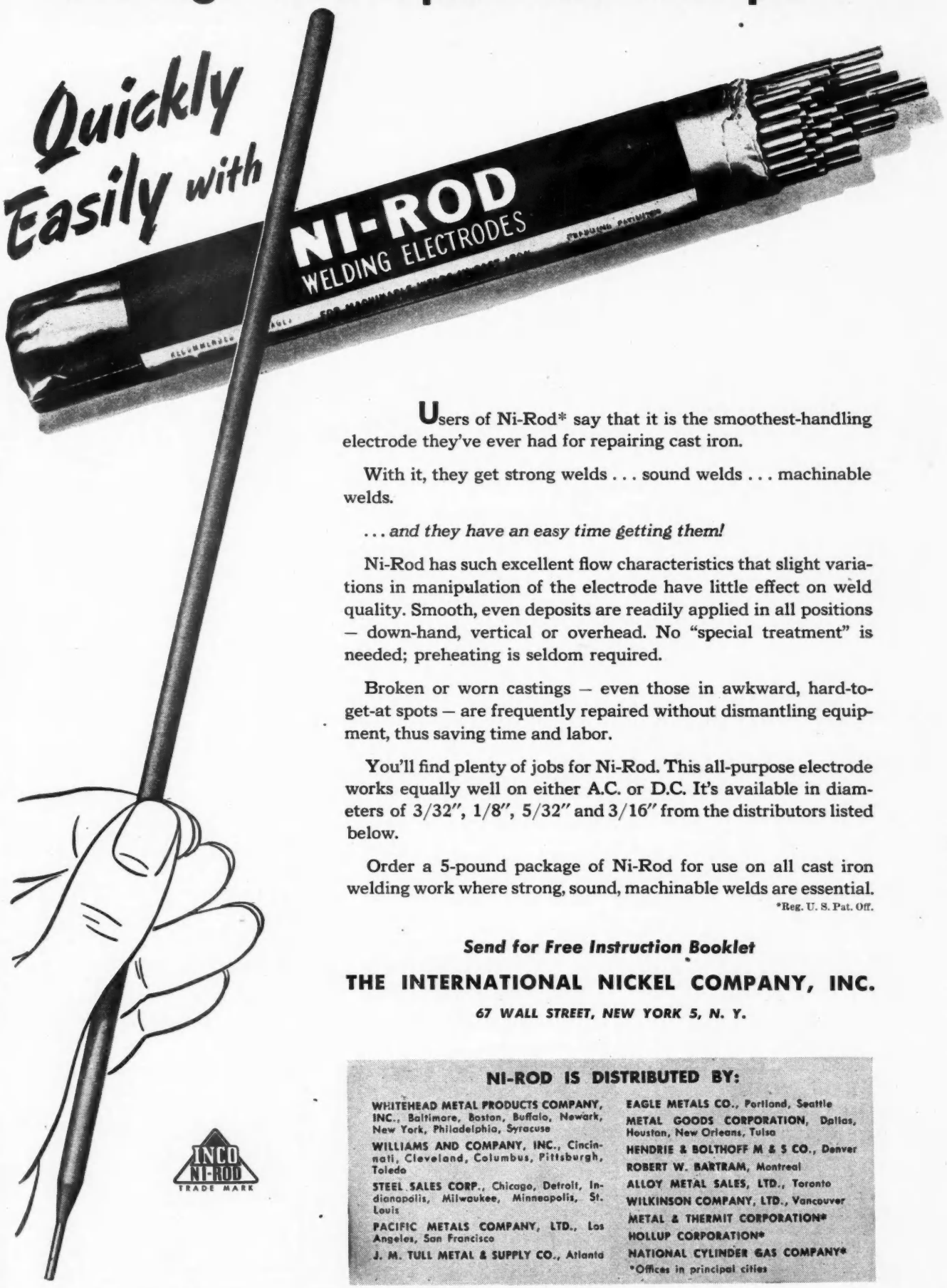
Operates automatically, helping only as the operator of the vehicle leads the steering wheel in either direction. Reduces the pull in steering—lessens strain on driver and steering mechanism.

Details and technical information available on request.

AIR-O-MATIC POWER STEER CO.

2180 Lee Road • • • • Cleveland 18, Ohio

Salvage and repair cast iron parts



Users of Ni-Rod* say that it is the smoothest-handling electrode they've ever had for repairing cast iron.

With it, they get strong welds . . . sound welds . . . machinable welds.

. . . and they have an easy time getting them!

Ni-Rod has such excellent flow characteristics that slight variations in manipulation of the electrode have little effect on weld quality. Smooth, even deposits are readily applied in all positions — down-hand, vertical or overhead. No "special treatment" is needed; preheating is seldom required.

Broken or worn castings — even those in awkward, hard-to-get-at spots — are frequently repaired without dismantling equipment, thus saving time and labor.

You'll find plenty of jobs for Ni-Rod. This all-purpose electrode works equally well on either A.C. or D.C. It's available in diameters of 3/32", 1/8", 5/32" and 3/16" from the distributors listed below.

Order a 5-pound package of Ni-Rod for use on all cast iron welding work where strong, sound, machinable welds are essential.

*Reg. U. S. Pat. Off.

Send for Free Instruction Booklet

THE INTERNATIONAL NICKEL COMPANY, INC.

67 WALL STREET, NEW YORK 5, N. Y.

NI-ROD IS DISTRIBUTED BY:

WHITEHEAD METAL PRODUCTS COMPANY, INC., Baltimore, Boston, Buffalo, Newark, New York, Philadelphia, Syracuse

WILLIAMS AND COMPANY, INC., Cincinnati, Cleveland, Columbus, Pittsburgh, Toledo

STEEL SALES CORP., Chicago, Detroit, Indianapolis, Milwaukee, Minneapolis, St. Louis

PACIFIC METALS COMPANY, LTD., Los Angeles, San Francisco

J. M. TULL METAL & SUPPLY CO., Atlanta

EAGLE METALS CO., Portland, Seattle

METAL GOODS CORPORATION, Dallas, Houston, New Orleans, Tulsa

HENDRIE & BOLTHOFF M & S CO., Denver

ROBERT W. BARTRAM, Montreal

ALLOY METAL SALES, LTD., Toronto

WILKINSON COMPANY, LTD., Vancouver

METAL & THERMIT CORPORATION*

HOLLUP CORPORATION*

NATIONAL CYLINDER GAS COMPANY*

*Offices in principal cities

Cal-Van
GARAGE TOOLS
2 and 3 FINGER TYPE
CARBON SCRAPER
LIGHT BULB PLIERS
RING COMPRESSORS
CREEPER CASTERS
BUSHING REMOVERS
REAMERS
GEAR PULLER
THREE-IN-ONE PULLER
WRITE FOR CATALOG
NO. 10 TIMING GEAR PULLER
Cal-Van
MACHINE PRODUCTS INC.
JACKSON, MICHIGAN, U.S.A.

NEW LOW COST
DRILL GRINDER
Anyone can do expert drill grinding with this simple-to-use drill grinding attachment—fits on any bench grinder—saves buying new twist drills—saves time and materials that dull bits waste. Grinds bits from 3/16 to 1¼.
WRITE for FREE literature.
T & H MFG. CO.
811-N East 31st K. C., Mo.

AMERICAN
BOSCH
AUTOMOTIVE & AVIATION ELECTRICAL PRODUCTS
FUEL INJECTION EQUIPMENT
American Bosch Corporation
Springfield, Mass.

CLEANER OIL
MEANS
• Longer Engine Life
• Lower Oil Expense
Write for Bulletin No. 837
MICHIANA PRODUCTS CORP.
Michigan City, Indiana
MICHIANA
OIL FILTERS

UNITS AVAILABLE
GRICO
2-AXLE DRIVE
19842 W. Eight Mile Rd.
Detroit 19, Michigan

KEEP YOUR VEHICLES MOVING ECONOMICALLY
with
HALL VALVE SERVICING EQUIPMENT
Ask Your Jobber or write
THE HALL MFG. COMPANY
TOLEDO 7, OHIO

CCJ Newscast

(CONTINUED FROM PAGE 384)

GREY-ROCK SALES CHANGES

The United States Asbestos Division, Manheim, Pa., has just announced a revision of Grey-Rock eastern sales districts.

F. D. Raymond, manager of the Middle Atlantic District during the war years, is now manager of the Central Atlantic District, with headquarters in Philadelphia.

John MacMurray, former territory representative in Central Pennsylvania, has been appointed district manager of the newly created Pittsburgh District, comprising Central and Western Pennsylvania, Eastern Ohio and West Virginia.

Frank McCloud, New England district manager, adds New York State (except Metropolitan New York) to his supervision duties.

E. L. J. Richardson, who has been doing special sales work in New England under McLoud, has been appointed a territory representative covering Southern New England.

AIR BRAKE FILM AVAILABLE

A twenty-five minute sound film subject titled, "Air Brakes, Operation and Maintenance," spearheads a broad educational program inaugurated by the Bendix-Westinghouse Automotive Air Brake Co., Elyria, Ohio.

Emphasizing the recognized simplicity of the air brake system, its operation and maintenance, this 16mm motion picture is available for meetings through all authorized Bendix-Westinghouse regional offices and distributors. The film promises to be a distinct help to both operators and manufacturers.

(TURN TO PAGE 388, PLEASE)

Tire Tools
FOR TIRES AND TUBES
Tire Demounters
Tire and Tool Branders
Tire Spreaders. Tube Vulcanizers
Everything for Tire Service
Write for FREE CATALOG
KEEL & CO., Inc., Phila. 44, Pa.
KEEL & CO.

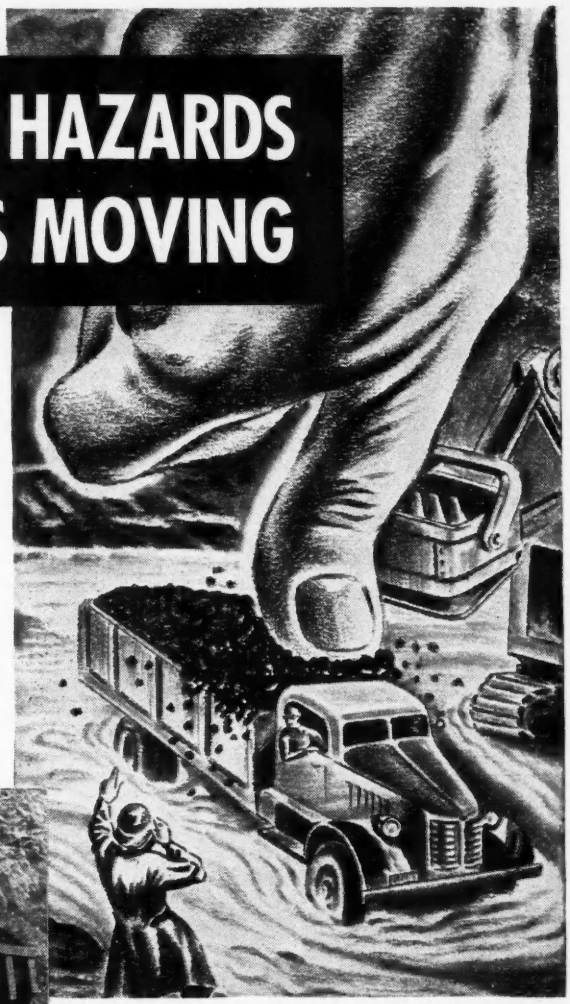
LOOK AFTER TO SEE WITH
YANKEE
YANKEE METAL PROD., CORP.
NORWALK, CONN.

Stop LOCKING AND SKIDDING FRONT WHEELS
Install a
HYSPECO
HYDRAULIC PRESSURE LIMITING VALVE
IN THE FRONT WHEEL BRAKE LINE OF YOUR POWER BRAKE INSTALLATION JOB
HYDRAULIC SPECIALTIES CO.
27 MECHANIC ST. - BUFFALO 2, N. Y.

CAMPBELL
Lug-Reinforced
TIRE CHAINS
THE CHAIN WITH THE SAW-TOOTH GRIP
U.S. Pat. No. 2,093,547 — Canadian Pat. No. 223,568
INTERNATIONAL CHAIN & MFG. COMPANY
YORK, PENNSYLVANIA

ZEHR
COLLAPSIBLE TRUCK BACKS
Safe . . . easy and simple to handle. Zehr Truck Backs are all-welded steel designed for great strength and long continuous service.
They are theft-proof, rust-proof and flexible.
Write for details and prices.
ZEHR PRODUCTS COMPANY
2130 East Hazzard Street, Philadelphia 25, Pa.

How to BEAT WEATHER HAZARDS and KEEP SCHEDULES MOVING



WHEN you sign the contract and set your schedules, *you can't predict the weather!* A siege of bad weather and difficult running conditions that stop your trucks, can be mighty costly.

You are not at the mercy of the weather with Walter Tractor Trucks. As long as shovels can dig, these giant trucks will haul. When conventional two--and four-wheel drives are stopped by soggy ground, mud, slippery surfaces and grades . . . Walter Tractor Trucks keep loads moving.



Right:
WALTER 20-TON DUMPER

•

Below:
WALTER TRACTOR TRUCK hauling 40 ton trailer



There's a sound reason for this—the Walter 4-Point Positive Drive. In this drive, three automatic locking differentials act as a "mechanical brain," proportioning power to each of the FOUR driving wheels according to its traction at any instant. There is no wheel spinning to bog down trucks, because power is automatically concentrated on the *working* wheels at all times.

As you start your season, get full facts on the many engineering features and operating advantages of Walter Tractor Trucks for severe off-the-road hauling.

WALTER MOTOR TRUCK CO.
1001-19 IRVING AVENUE,
RIDGEWOOD 27, QUEENS, L. I., N. Y.

WALTER
TRACTOR TRUCKS

Oldforge "Quality" Tools

For twenty years we have made hand tools of the finest quality and design for use in the mecnanical trades and for industry. That we have succeeded has been proved. OLDFORGE "QUALITY" TOOLS have become first choice of discriminating skilled mechanics.

The mechanics in your service department, too, will endorse "QUALITY TOOLS." Their temper and design assures daily uninterrupted service—and their cost is modest.

Ask your supplier or write us direct.

QUALITY TOOLS CORP., New Wilmington, Pa.
New York Office: 11 Warren St. • Phone WOrth: 3640

Ry for truck and tractor cooling systems . . .

Warner

• COOLING SYSTEM PROTECTOR
• LIQUID SOLDER (Non-Metallic, deposits tiny fibers to repair leaks)
• SERVICE CLEANER

Warner-Patterson Co. 9205. Michigan Ave. Chicago 5, Illinois

HEAVY DUTY MOTOR TRUCKS
AND
GASOLINE ELECTRIC GENERATING SETS
DUPLEX TRUCK COMPANY
Lansing, Michigan

SALESMEN
Experienced Fleet Men
DIRECT TO USER SALES
Oil Filter Elements
REFILL FILTER CO.
120 Rhode Island Ave.
East Orange, N. J.



The Wedler-Shuford Co.
St. Louis 3, Mo.

FRINK SNO-PLOWS
REG. U.S. PAT. OFF.
Both "V" TYPE and ONE WAY BLADE TYPE
hand or power hydraulic control
FOR ALL MOTOR TRUCKS FROM 1½ to 10 TONS
CARL H. FRINK, Mfr., CLAYTON, 1000 Isl., N. Y.
DAVENPORT-BESLER CORP., DAVENPORT, IOWA
FRINK SNO-PLOWS OF CAN. Ltd., TORONTO, ONT.

CCJ Newscast

(CONTINUED FROM PAGE 386)

DRIVE SLOWGANS

(Some of the better non-prize-winning slogans submitted in the recent contest conducted by the American Trucking Associations, Inc.)

DRIVE TO SURVIVE

* * *

Anytime, Anywhere, Take Care

* * *

There's a YOU in Caution

* * *

Careful Drivers—Safe Arrivers

* * *

Everyone Gains Where Safety Reigns

* * *

Be Wise Don't Jeopardize

* * *

SWEET AND SLOW

* * *

Economize by Driving Wise

* * *

Careful Today, Carefree Tomorrow

* * *

Courtesy Costs Nothing—Safety Is Priceless

* * *

REMEMBER THE MAIMED

* * *

Use Your Eyes, Your Ears, Your Knows

* * *

Remember To Say I'll Be Careful Today

* * *

LOOK BEFORE YOU LIMP

* * *

Stop a Minute, Not Forever

END

(Please resume your reading on P. 136)

DECALS
for FLEET MARKING

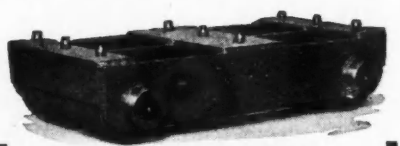
Costs less than hand lettering. Does not tie up equipment.
Quantities — 50 pieces or more any size.
Can reproduce any art work.

Prompt Delivery

EXCELLO SPECIALTY CO.
4101 East 100 St. Cleveland 5, Ohio



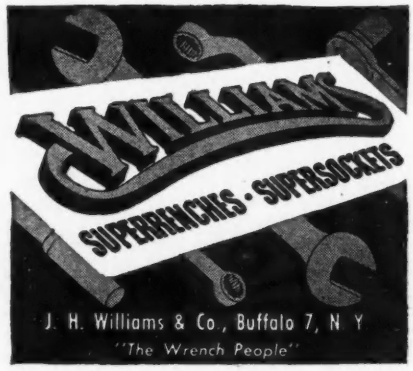
MOOG INDUSTRIES INC.
ST. LOUIS, MO.



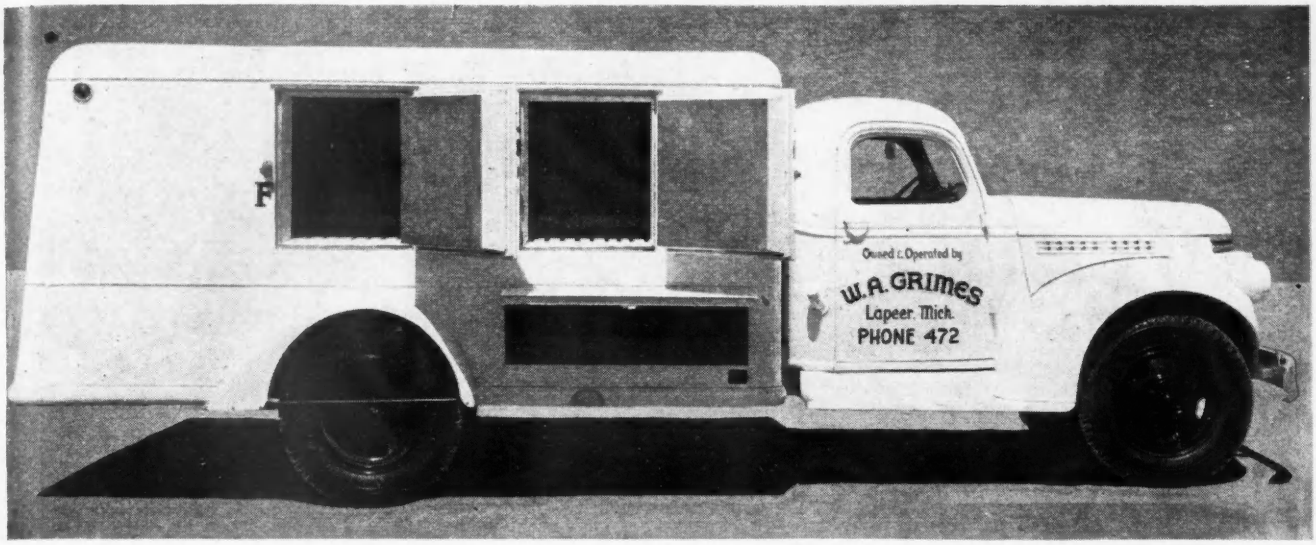
CARRY LOADS OF 10 TO 12 TONS PER PAIR

"Skid-Rol" Dollies. Heavy-duty. All-steel. For moving or shifting machinery, heavy objects, etc. Steel cleats bite into wood skids. Safer — faster. Size 18½"x10½"x4" high. Fill in below — Techtmann Industries—Milwaukee 1, Wis. Send details re: "Skid-Rol" Dollies to:

.....
..... CCJ



J. H. Williams & Co., Buffalo 7, N. Y.
"The Wrench People"



Swift Body and Equipment Co. of Saginaw, Michigan, built this refrigerated truck body from Parish Universal Body Sections.

PARISH Offers New "Highs" In *BODY APPEARANCE, UTILITY AND ECONOMY*

Parish makes it possible for body builders to supply truck fleets with strong, lightweight truck and trailer bodies which are individually engineered and built for the job each truck has to do.

This is possible because of Parish's *exclusive, complete* line of prefabricated, high-tensile steel body sections which contain all of the engineering features developed at Parish since its first pioneered Universal Body Sections. It is no accident that Parish has the largest and most complete set-up of tools and equipment for the production of truck and trailer frames and body sections.

Hundreds of body builders are using Parish Body Sections because of the following features they make possible in truck and trailer bodies:

- **Individualized Design.** The wide variety and adaptability of sections in the Parish line make it possible to build bodies ideally suited for every specialized type of truck service.
- **Attractive Appearance.** Each section has been designed to provide stream-lined body exteriors and interiors.
- **Simplified Layout.** Made possible by the "Erector Set" principle followed in the Parish B line.
- **Quicker Delivery.** There is a 50% saving in assembly time when using Parish sections because of their engineering features. Some of these are prepunched holes on accurate synchronized centers, holes to accommodate the riveting of panel sheets, roof moldings which are integral with the roof caps and unit sub-assemblies of roofs, ends and doors.
- **Strength Without Excess Weight.** High-tensile steel is used throughout. Sections are tapered or adjusted in weights and gauges to keep upper portion of the structure light. Other features contribute to strength, such as flare bottom post bases which reinforce posts at points of stress.
- **Easy Maintenance.** All functional parts are accessible so that repairs to individual sections can be made with a minimum of tear-down.

Body manufacturers are invited to write for our latest Body Section Catalogs A and B.

You can rely on the experience of the country's many leading automobile, truck, trailer and truck body manufacturers who use Parish Products. It Pays To Specify PARISH

Pressed Steel Heat-treated Frames for automobiles, trucks, tractors and trailers and Universal Body Sections.

PARISH PRESSED STEEL CO. *Subsidiary of* **DANA CORP.**
READING, PA.

Western Representative: F. Somers Peterson, 57 California St., San Francisco, Cal.

A HOT TIP ON TROUBLE-FREE TRUCKING



USE KESTER Cored SOLDERS

The pay-off depends on top performance when the load is heavy and the road is long. Make dependable repairs with Kester Cored Solders and guard trucking operations against the heavy cost of breakdowns and delays on the road.

Whether the haul calls for smooth cruising over a super highway or grinding over the ruts and rocks of a neglected side road, Kester Cored Solders hold tight—withstand shock, vibration, twisting, bending and the gruelling effects of weather extremes.

Application of Kester Cored Solder is quick, easy—virtually mistake-proof. The positive acting flux in the core makes it possible to complete the soldering job in one simple operation.

The consistent superior performance of Kester Cored Solders has made them standard for every automotive use. Their unvarying uniformity and high quality is the result of nearly half a century of practical experience and laboratory research.

Use Kester Cored Solders and keep payloads rolling on schedule. For electrical work, it's Kester Rosin-Core Solder; for general automotive soldering, Kester Acid-Core Solder. Order from your jobber today.

KESTER SOLDER COMPANY

4205 Wrightwood Ave., Chicago 39, Illinois

Eastern Plant: Newark, N. J.
Canadian Plant: Brantford, Ontario



KESTER
Cored Solders
FOR EVERY AUTOMOTIVE USE

CCJ TRUCK SPECIFICATIONS TABLE

(Continued from Page 91)

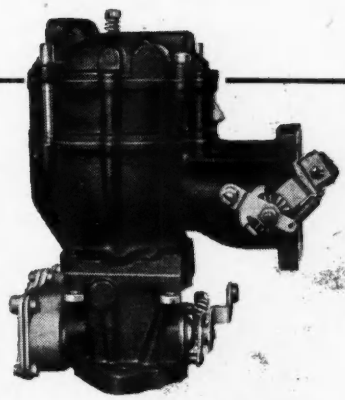
Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE: Minimum Standard	WHEEL-BASE: Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES: Standard Front and Rear	TIRE SIZES: D-dual rear S-single rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	ENGINE DETAILS: No. of Cylinders, Bore and Stroke	ENGINE DETAILS: Displacement	ENGINE DETAILS: Comp. Ratio	ENGINE DETAILS: Torque lb. ft.	ENGINE DETAILS: Max. Brake H.P. at R.P.M. Given	ENGINE DETAILS: Main Bearings: Number, Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	TRANSMISSION: Forward Sp'ds	REAR AXLE: Make and Model	REAR AXLE: Gear and Type	REAR AXLE: Drive X Torque	REAR AXLE: Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES: SERVICE: Make Location Type Operat'n	BRAKES: SERVICE: Lining Area	BRAKES: SERVICE: Drum Area	BRAKES: SERVICE: Drum Material	BRAKES: SERVICE: Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	FRAME: Type
1	Sterling Cont'd.																																
2	HWS235H		182	193	52000	16000	11.00/20		11.00/24	Cum HB600	6—4½x6	672	17.	500	150–1800	7—4½x16½	Y Fu 4B86	4T-SW456P	4 Ford	SF	** —6.67 Ford				W861A	1308	1892	A	TX	92	9¼x33¾x¾	A
3	HCS195		170	189	48000	15300	10.00/20		11.00/22	Wau 140GK	6—5½x6	7796	2585	186	2100	7—3½x17½	Y Fu 4B86†	Own 195W	8 Eat 1350	SF	5.83–8.11 Ford				W861A	1082	1622	A	TX	92	9¼x33¾x¾	A
4	HCS265		182	193	60000	17750	11.00/24†		13.00/24‡	Wau 145GK	6—5½x6	7796	2585	186	2100	7—3½x17½	Y Fu 4B86†	12 Own 330W	12 Cla R1300	SF	5.67–6.83 Ford				W861A	1060	1732	A	TX	92	9¼x33¾x¾	AL
5	HCS297		182	193	80000	23150	12.00/24		14.00/24‡	Wau 145GK	6—5½x6	7796	2585	186	2100	7—3½x17½	Y Fu 4B86†	12 Own 330W	8 Ford	SF	6.07–10.5 Ford				W861A	1280	1872	A	TX	92	12x33¾x¾	AL
6	HCS330		182	193	80000	23150	12.00/24		14.00/24‡	Wau 145GK	6—5½x6	7796	2585	186	2100	7—3½x17½	Y Fu 4B86†	12 Own 330W	8 Ford	SF	6.07–10.5 Ford				W861A	1082	1622	A	TX	92	9¼x33¾x¾	A
7	HCS195H		170	189	48000	15300	10.00/20		11.00/22	Cum HB600	6—4½x6	672	17.	500	150–1800	7—4½x16½	Y Fu4B86-3A92	12 Own 195W	8 Eat 1350	SF	5.83–8.11 Ford				W861A	1060	1732	A	TX	92	9¼x33¾x¾	AL
8	HCS265H		182	193	60000	18100	11.00/20		12.00/24	Cum HBD600	6—4½x6	762	17.	500	150–1800	7—4½x16½	Y Fu 4B86†	12 Own 265W	12 Cla R1300	SF	5.67–6.83 Ford				W861A	1280	1872	A	TX	92	9¼x33¾x¾	AL
9	HCS297H		182	193	70000	21050	12.00/24†		13.00/24‡	Cum HBD600	6—4½x6	672	17.	500	150–1800	7—4½x16½	Y Fu 4B86†	12 Own 330W	8 Ford	SF	6.07–10.5 Ford				W861A	1280	1872	A	TX	92	12x33¾x¾	AL
10	HCS330H		182	193	80000	23450	12.00/24		14.00/24‡	Cum HBD600	6—4½x6	672	17.	500	150–1800	7—4½x16½	Y Fu 4B86†	12 Own 330W	8 Eat 1350	SF	6.07–10.5 Ford				W861A	1280	1872	A	TX	92	12x33¾x¾	AL
11	Trucksteel																																
12	(C) F2X26 2F		156	237	26000	5900	7.50/20		8.25/20	Ford	6—3½x3¾	2396	4.18	100	3800	3—2¼x4.71	N Ford		4 Ford	SF					F61HV	502	836	c	TX	82½	7½x33x.47	CT†
13	(C) F2X27-0 2F		156	237	27000	4450	7.50/20		8.25/20	Ford	6—3½x3¾	2396	4.18	100	3800	3—2¼x4.71	N Ford		8 Eat 1350	SF					F61HV	502	836	c	TX	82½	7½x33x.47	CT†
14	(C) F2X34 2F		156	237	34000	6235	7.50/20		10.00/20	Ford	6—3½x3¾	2396	4.18	100	3800	3—2¼x4.71	N Ford		12 Cla R1300	SF					F61HV	605	1043	a	TX	82½	7½x33x.47	CT†
15	(C) F3X34-0		135	224	34000	6235	7.50/20		10.00/20	Ford	6—3½x3¾	2396	4.18	100	3800	3—2¼x4.71	N Ford		12 Cla R1300	SF					F61HV	605	1043	a	TX	63¾	7½x33x.47	CT†
16	(C) F3X26 4R		144	210	26000	6300	7.50/20		8.25/20	Ford	6—3½x3¾	2396	4.18	100	3800	3—2¼x4.71	N Ford		8 Ford	SF					F61HV	502	836	c	TX	63¾	7½x33x.47	CT†
17	(C) F3X27-0		117	180	27000	7200	7.50/20		8.25/20	Ford	6—3½x3¾	2396	4.18	100	3800	3—2¼x4.71	N Ford		8 Ford	SF					F61HV	502	836	c	TX	63¾	7½x33x.47	CT†
18	(C) F3X29 4R		117	180	30000	7200	7.50/20		8.25/20	Ford	6—3½x3¾	2396	4.18	100	3800	3—2¼x4.71	N Ford		8 Ford	SF					F61HV	502	836	c	TX	63¾	7½x33x.47	CT†
19	(C) FX29 4R		117	180	30000	7200	7.50/20		8.25/20	Chevrolet	6—3½x3¾	2356	6.192	93	3100	4—2¼x5½	N Chevrolet		4 Chevrolet	SF					C61HV	546	780	a	2I	82¼	7½x33x.47	CT†
20	(C) C2X28 2F		157	234	28000	4500	7.50/20		8.25/20	Chevrolet	6—3½x3¾	2356	6.192	93	3100	4—2¼x5½	N Chevrolet		8 Tim	SF					C61HV	546	780	a	2I	82¼	7½x33x.47	CT†
21	(C) C2X34 2F		157	234	34000	6825	7.50/20		10.00/20	Chevrolet	6—3½x3¾	2356	6.192	93	3100	4—2¼x5½	N Chevrolet		12 Cla R1300	SF					C61HV	615	1043	a	TD	82¼	7½x33x.47	CT†
22	(C) C4X26 4R		141	224	34000	6610	7.50/20		10.00/20	Chevrolet	6—3½x3¾	2356	6.192	93	3100	4—2¼x5½	N Chevrolet		8 Chevrolet	SF					C61HV	546	780	a	2I	63¾	7½x33x.47	CT†
23	(C) C4X27-0		145	211	26000	5120	7.50/20		7.50/20	Chevrolet	6—3½x3¾	2356	6.192	93	3100	4—2¼x5½	N Chevrolet		16 Eat 1350	SFd	6.41–11.1 Chevrolet				C61HV	546	780	a	2I	63¾	7½x33x.47	CT†
24	(C) C4X29 4R		145	212	29000	6880	7.50/20		8.25/20	Chevrolet	6—3½x3¾	2356	6.192	93	3100	4—2¼x5½	N Chevrolet		16 Eat 1350	SFd	7.47–12.9 Chevrolet				C61HV	512	836	a	TD	63	7½x33x.47	CT†
25	(C) C4X30-0		117	184	30000	7290	7.50/20		8.25/20	Chevrolet	6—3½x3¾	2356	6.192	93	3100	4—2¼x5½	N Chevrolet		16 Eat 1350	SFd	7.47–12.9 Chevrolet				C61HV	512	836	a	TD	63	7½x33x.47	CT†

* Includes cab. † Rear only; Front 11.00/24. ‡ Rear only; Front 12.00/24. ♦ Auxiliary transmission spicer 8031.

you can get both



with ZENITH CARBURETOR



Shopping for bargains can be risky business—but when you find an honest dollar-and-cents savings based on sound value, it is foolish to pass it up. That is just the kind of value you get when you specify Zenith*. For at the same time you obtain the finest carburetion it is possible to put on your equipment it is backed by a vast organization of carburetor service specialists.

Zenith carburetors embody the results of 30 years of specialized know-how in the heavy-duty field, and are designed specifically for your kind of equipment. They deliver reliable, trouble-free, *economical* service that means more profits for you.

The Zenith Service Organization with a staff of specially trained craftsmen, working with the finest equipment, will keep your vehicles where they make money for you—on the road, in peak condition. Find out first-hand how Zenith can mean more profit for you. See your Zenith distributor or write the factory direct.

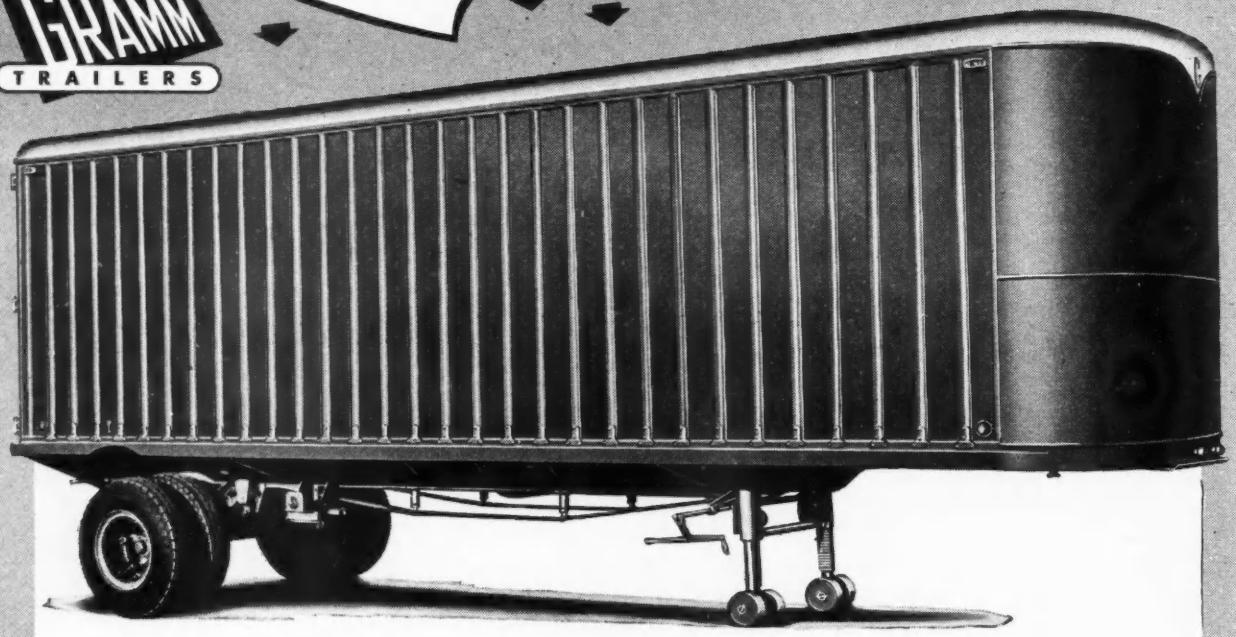
*TRADE MARK

ZENITH CARBURETOR DIVISION OF Bendix AVIATION CORPORATION

696 HART AVENUE, DETROIT 14, MICHIGAN

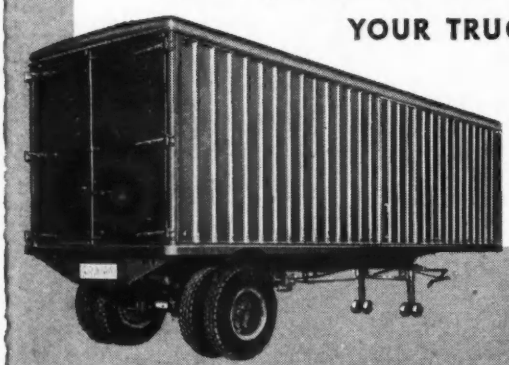
RUGGED
TOP TO BOTTOM!

GRAMM TRAILERS



Corrugated Van

For dependable day-in, day-out transport service under abusive conditions, there is no finer investment than the rugged GRAMM all-steel corrugated van. This "work horse" trailer combines the strength of the famous GRAMM under-construction with lightweight yet tough and durable corrugated body. It's of highest quality construction, soundly engineered and honestly built. Low center of gravity assures easy pulling, easy handling, and greater safety. Available in single or tandem axle units in wide range of popular lengths, with or without side doors and optional square or oval fronts. Get all the facts on this corrugated van before you buy!



YOUR TRUCK DEALER WILL GLADLY SUPPLY YOU WITH COMPLETE INFORMATION AND PRICES ON ALL GRAMM TRAILERS

GRAMM

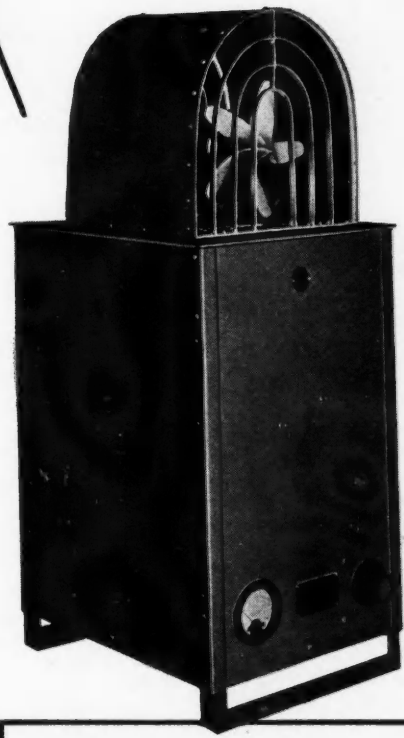
GRAMM TRAILER CORPORATION
MAIN OFFICES: DELPHOS, OHIO

SOLD BY LEADING INDEPENDENT DISTRIBUTORS AND DEALERS



DESTROY EXHAUST GASES

THAT CAUSE HEADACHES... HAMPER PRODUCTION... COST MONEY!



General Ozone Regulated Ionizing Equipment **DESTROYS EXHAUST GASES** electrically, *without opening doors and windows*—leaves air fresh . . . clean! Worker efficiency goes up—out-of-service time on revenue producing trucks and buses is reduced to a minimum.

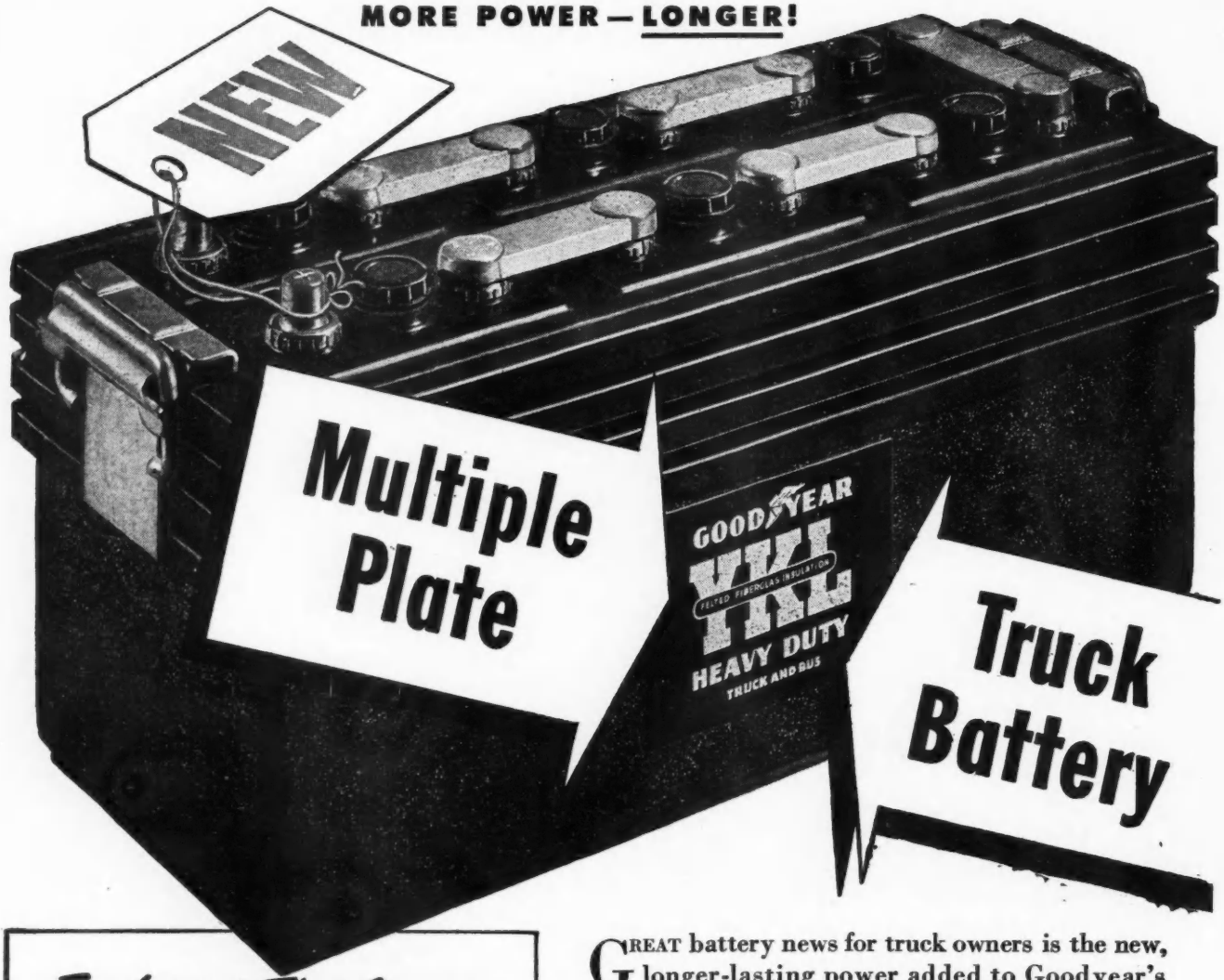
Hundreds of these money-saving units are destroying exhaust gases—eliminating headaches—improving working conditions in major garages and repair shops throughout the country. Nothing to set up...no chemicals or refills...no special wiring. Just plug it in and it goes to work! Write today for complete information!

GARAGE *AirClear*

GENERAL OZONE CORPORATION
17 West Sixtieth Street, New York 22, N. Y.
New York • Chicago • Denver

Manufacturers of ozone generating equipment for garages . . . cold-storage warehouses . . . refrigerated cars . . . walk-in coolers . . . air recirculating systems . . . homes . . . hospitals.

MORE POWER—LONGER!



Free Loan to Fleet Owners:

GOODYEAR TRUCK BATTERY

PowR SavR



Fleet owners of 25 or more trucks can get free loan of this Goodyear exclusive which insures safe, automatic care of idle Goodyear batteries right in your own garage—batteries always at power peak, instantly ready at *any* hour. See your Goodyear dealer for details.

YKL BATTERIES
—for buses, trucks, tractors

GREAT battery news for truck owners is the new, longer-lasting power added to Goodyear's heavy-duty YKL. This power-*full* battery now has 25-30% more plates—*greater electrical capacity without increase in size.*

A new-type construction does it—micro-porous rubber separators and felted Fiberglas insulation mats. As a result, the YKL:

1. Packs more power and holds it longer
2. Delivers up to 100% better cold-weather starting

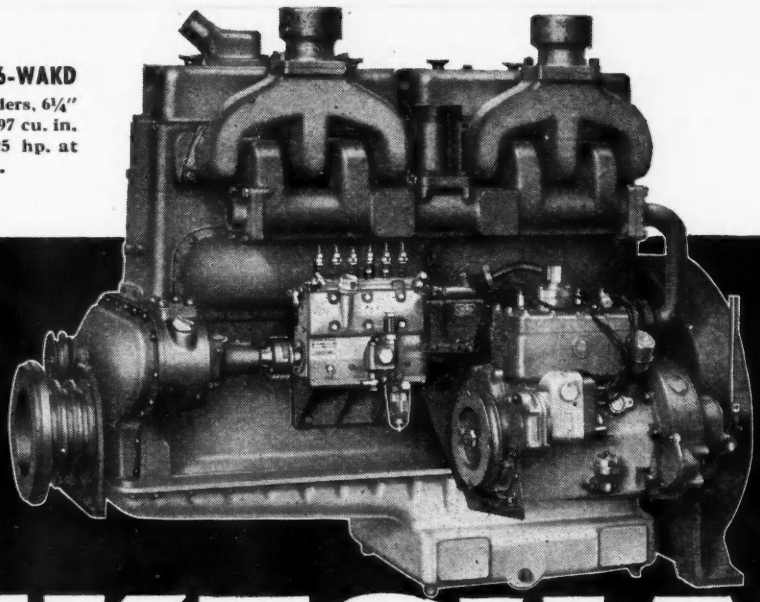
What's more, your Goodyear dealer's "PowR SavR" keeps Goodyear batteries *automatically* at *full* power until installed. So your YKL has more punch to start with—more "go" to keep going. Better see your Goodyear dealer now about the new multiple-plate YKL—today's top battery buy!

YKL, PowR SavR—T.M.'s The Goodyear Tire & Rubber Company

GOODYEAR

THE GREATEST NAME IN RUBBER

Model 6-WAKD
Six cylinders, 6¼" x 6½", 1197 cu. in. displ., 225 hp. at 1600 rpm.



TAKE A LOOK AT THIS HUSKY QUICK-STARTING HIGHLY FLEXIBLE

WAUKESHA *Diesel*

for HEAVY-DUTY INDUSTRIAL SERVICE

Shovels, Air Compressors, Oil Field Drilling, Off-Highway Trucking, Crawler Tractors, Logging, Saw Mills, Cotton Gins, Irrigation Pumps, Water Supply, Electric Power Generation, and Heavy Construction Machinery of all kinds.



● This big, new, four-cycle Waukesha Diesel is packed with *performance proved* features that give super power, smoothness and acceleration, high fuel economy, and longer life with lower upkeep.

These modern construction and design features include: Large, seven-bearing crankshaft, with hardened crankpins and main bearings testing to 600 Brinell; vibration dampener; removable, wet-sleeve cylinders hardened to 350-400 Brinell; aluminum pistons with six rings (4 non-sticking, wedge-type; 2 straight side oil control rings, and with top ring chrome plated for long life); rifle-drilled connecting rods—I-beam section with deeply ribbed caps held by four heat-treated cap bolts; precision-type, steel-backed, heavy-duty, Diesel-design main bearings; intake and exhaust valves of chrome silicon alloy with hardened exhaust seat inserts; full pressure lubrication by outside mounted positive gear-type pump; large capacity oil cooler mounted on cylinder block; American Bosch injection pump; 24-volt electric starting system, with glow plugs, or gasoline starting engine.

Consult Waukesha engineers about your special problems and engine needs.

WAUKESHA MOTOR COMPANY • WAUKESHA, WIS.
NEW YORK • TULSA • LOS ANGELES



A Beautiful Billboard
THAT PAYS YOU RENTAL!

It's a fact! Not only does a sleek, streamlined EBCo Armorlite van panel make a most effective "traveling billboard" to advertise your business, but it actually *pays you money* in dramatic savings on trucking costs.

Thanks to its revolutionary ALUMINUM-MAGNESIUM construction, an Armorlite body reduces dead weight tremendously. *You carry that much extra payload.* And when running empty, this weight reduction saves on gas, tires and wear and tear. In addition, an Armorlite's larger interior gives you more room for bulky loads.

For further information on this modern lightweight van panel, see your distributor, or write to us today.

E·B·Co ARMORLITE TRUCK BODIES

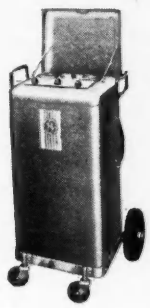
By the World's Largest Builder of Submarines

Commercial Body Division, ELECTRIC BOAT COMPANY, Groton, Conn.



YOU WANNA START SOMETHING?

...GET A G-E FAST CHARGER

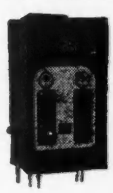


Quick, reliable starting of trucks and busses can be assured when fleet operators keep batteries charged the G-E way.

For the G-E Fast Charger will indicate in less than half a minute whether the battery will take a charge, and in thirty minutes it will substantially charge a normal run-down 6-volt battery without removal from the truck. After this period the initial high-charging rate automatically tapers to a safe 15-20 amp finishing rate. Thus — you safeguard against battery damage and cut power cost, as well.

So — if you want to start something quickly, surely, and ... economically — write for further information on the G-E Fast Chargers and Full-wave Tungar* Chargers. Send inquiry to Section A38-415, Appliance and Merchandise Department, General Electric Company, Bridgeport 2, Connecticut.

For large capacity charging — the heavy-duty, wall-type G-E Tungar is built to handle up to 24 six-volt batteries at 2 to 6 amp, or up to 12 batteries at 12-amp rate. They're flexible, easy-to-use, economical to operate.

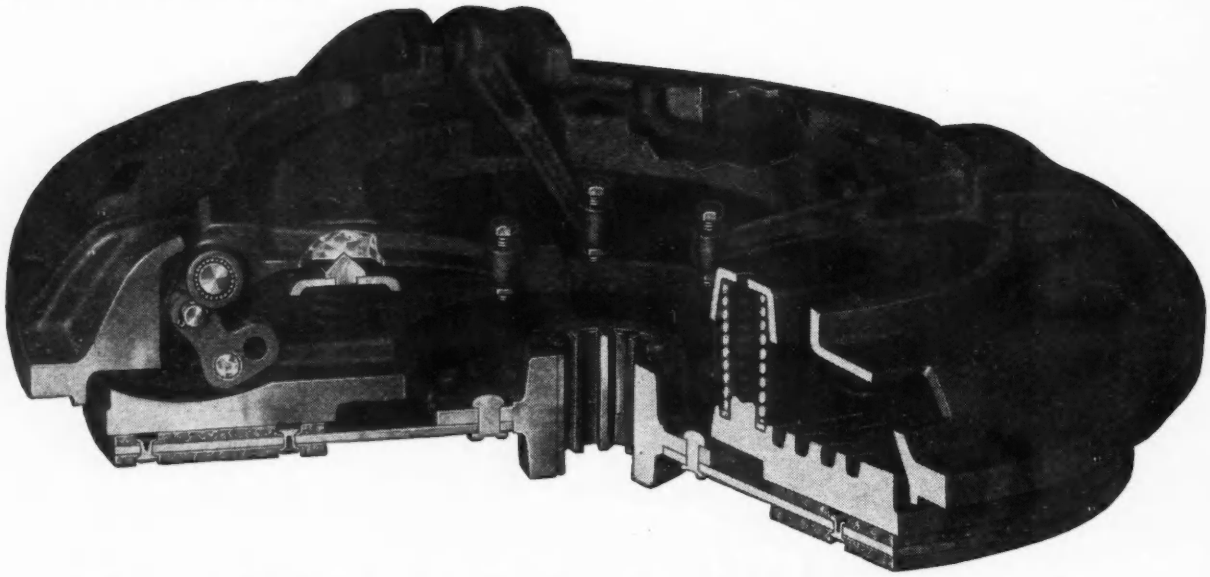


Trade mark Reg. U. S. Pat. Off.

GENERAL ELECTRIC

CONSTANT TORQUE CAPACITY UNTIL FRICTION MATERIAL WEARS OUT

New LIPE CONSTANT-CAPACITY CLUTCH OF THE NON-ADJUSTABLE TYPE



The new Lipe Constant-Capacity Clutch uses an entirely different application of the toggle-lever principle: Compensates for fading pressure of expanding springs . . . Maintains maximum torque capacity throughout life of frictional material

The constantly increasing ratio of the toggle levers —which never go over center—compensate for the loss of pressure due to spring expansion. So long as there is enough frictional material to hold, the New Lipe Constant-Capacity Clutch of the non-adjustable type does not lose torque capacity.

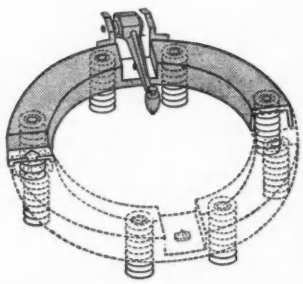
Every Feature Of This Clutch Gives You Extra Service . . .

Engages gently because the toggles absorb the initial energy of the springs . . . and because the speed of the toggle action fades as the pressure plate approaches the friction element.

It has a high thermal efficiency because the massive plate, ribbed for rapid radiation, is cooled by positively generated air currents.

The pressure plate and friction element always parallel. Non-adjustable, serviced without special tools.

The New Lipe Constant-Capacity Clutch Is Now In Quantity Production. WRITE TODAY for specifications and performance data.

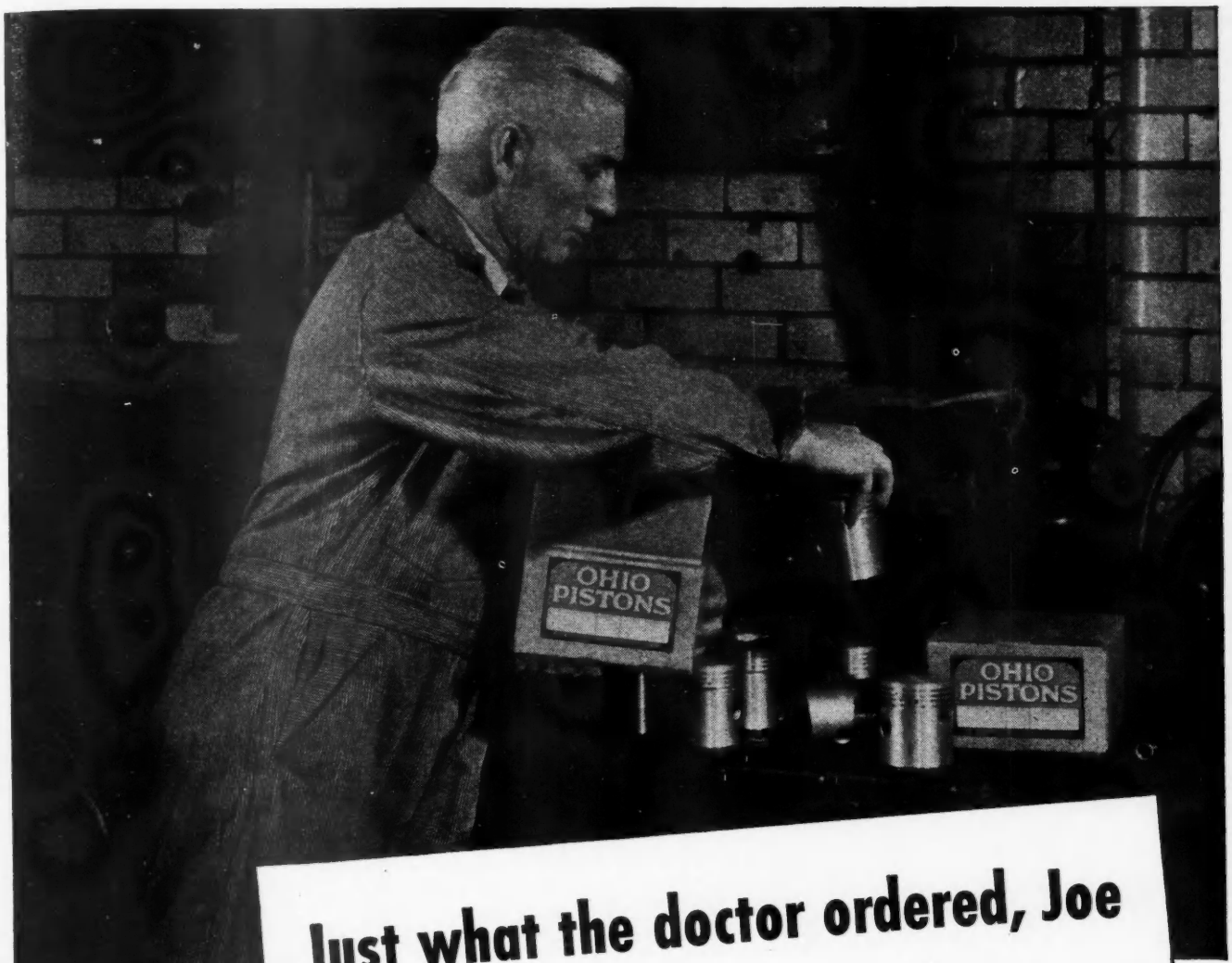


Equalizing Ring
Balances Spring Pressures

The General Sherman Tanks Used
The Lipe Constant-Capacity Clutch

LIPE ROLLWAY

Lipe-ROLLWAY CORPORATION SYRACUSE 1, N. Y.
Cable Address: LIPEGEAR



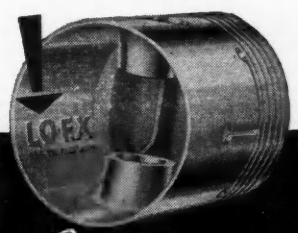
Just what the doctor ordered, Joe

For finishing off an engine overhauling job, ALCOA LO-EX* PISTONS by OHIO can't be beat. They help assure maximum power, smoother performance, greater economy of fuel and oil, and longer bearing life.

Ask for them by name—"ALCOA LO-EX PISTONS by OHIO"—and you'll get the finest replacement pistons money can buy.

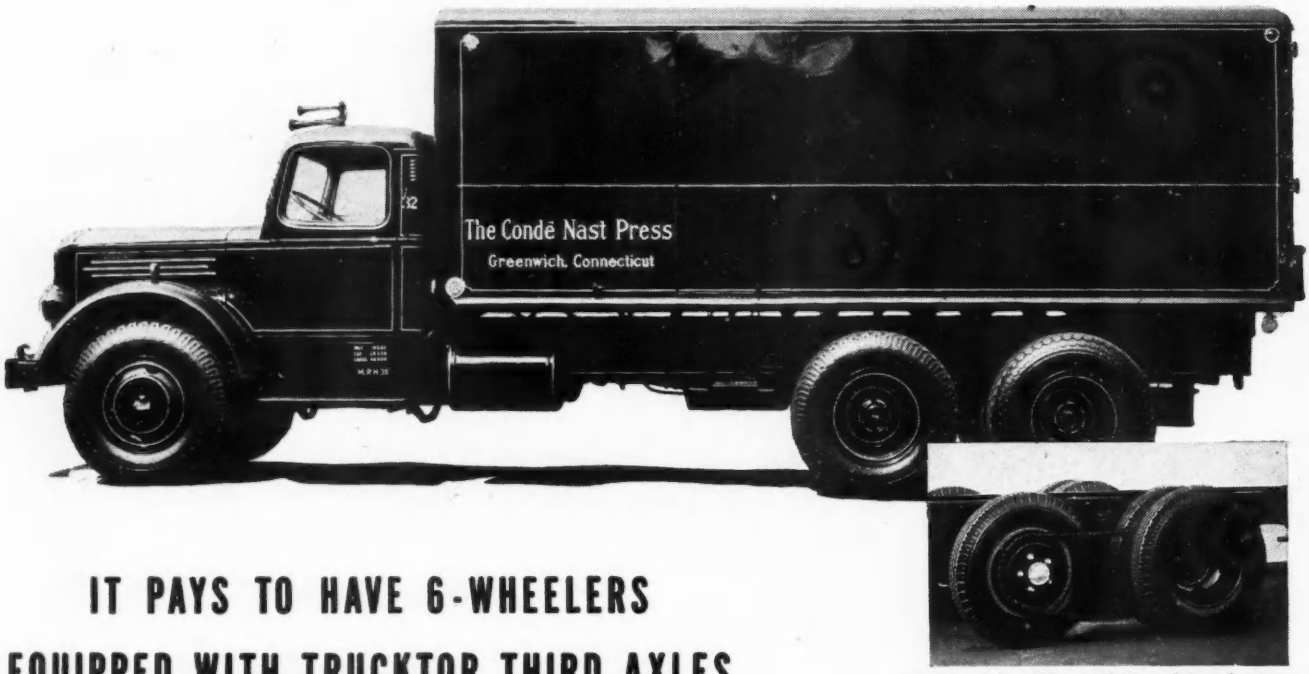
**LO-EX and ALCOA are registered trade marks of Aluminum Company of America, makers of castings for genuine LO-EX Pistons.*

LOOK FOR THE TRADE MARK



The OHIO PISTON Company
CLEVELAND, OHIO

TRUCKTORED 6-WHEELERS ARE SAFER!



Detachable 4-Wheel *Chain-and-Sprocket* Drive

IT PAYS TO HAVE 6-WHEELERS EQUIPPED WITH TRUCKTOR THIRD AXLES

OPERATORS admit that the safest hauling vehicle on the road is a single unit *Six-Wheel Truck*. The U. S. Army prefers them. So do the I.C.C. and Commercial Insurance Companies who acknowledge their superior safety in 25% to 50% lower insurance rates.

In *Trucktored* Six-Wheelers you not only get a *safe* vehicle but a steady-running, easy handling unit which carries up to double its previous payload. You are provided with a single, compact truck that has the advantages of lower first cost . . . lower operating costs . . . less maintenance upkeep . . . less deadweight . . . lower license fees.

Thousands of trucks and tractors have the benefit of *Trucktor* Third Axles. It will pay you to have them in yours. *Write today for details and literature.*

SEVEN REASONS WHY:

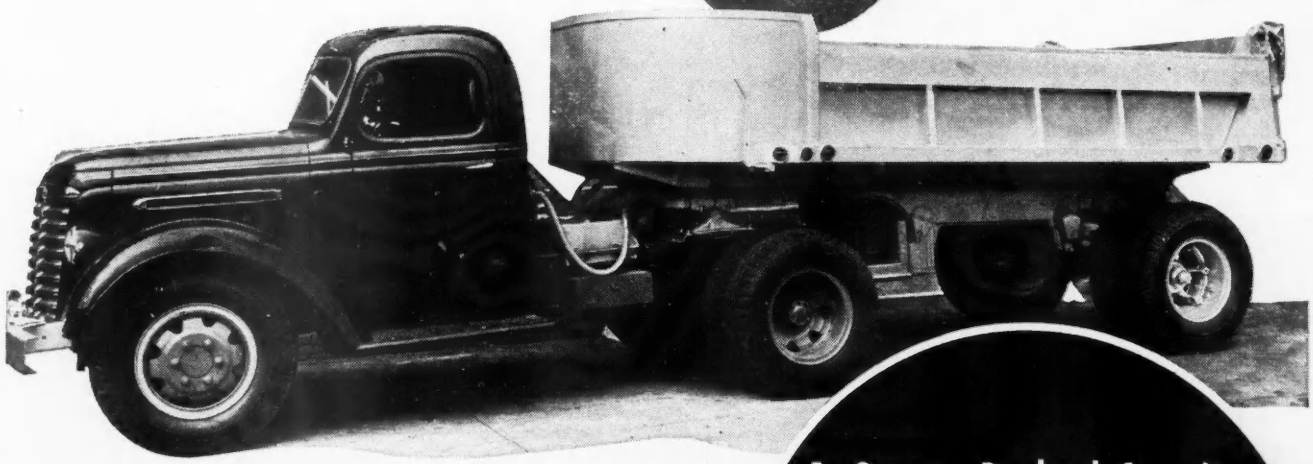
1. **Better traction, with chain-and-sprocket drive, on wet or icy roads.**
2. **No jack-knifing hazard and less danger of skidding or slipping.**
3. **Powerful *six-wheel* braking in one effective motion.**
4. **Reduced side-sway, bouncing and vibration.**
5. **Easier to drive, to back, to maneuver.**
6. **No danger of accidental uncoupling of units.**
7. **Correct load distribution and low center of gravity.**

THE TRUCKTOR CORPORATION
156 WILSON AVENUE • NEWARK 5, N. J.

Trucktor THIRD AXLES

MAKERS OF THIRD AXLE UNITS EXCLUSIVELY

You Save 4 Ways



1. Greater Payload Capacity
2. Lower Maintenance Cost
3. Reduced Fuel Consumption
4. Less Tire Wear

WITH REPUBLIC
High Strength Steels

1. MORE PAYLOAD. A minimum yield point of 50,000 pounds permits use of thinner and lighter sections to cut body deadweight. Every pound thus saved becomes a potential added pound of payload.

2. FEWER REPAIRS. Because these steels are 4 to 6 times more resistant to atmospheric corrosion than carbon steels, as well as high in strength, they make bodies more durable and long-lasting—keep them out of repair shops—save ever-climbing maintenance expense.

3. LESS FUEL. Lower body weight means a substantial saving in fuel when running light.

4. LONGER TIRE LIFE. Lighter weight when traveling empty also saves wear on tires.

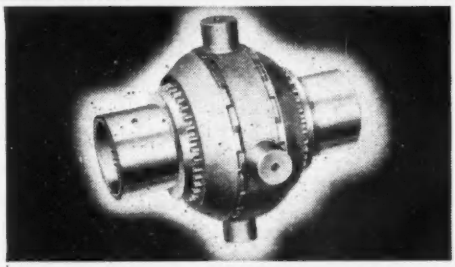
To help designers and builders of truck and trailer equipment obtain greater benefits, Republic now offers three *different* high strength steels—Republic ALDECOR, Republic COR-TEN and Republic DOUBLE STRENGTH—in sheets, strip, plates and bars. For further information send for Booklet No. 445.

REPUBLIC STEEL CORPORATION
GENERAL OFFICES • CLEVELAND 1, OHIO
Export Department: Chrysler Bldg., New York 17, N. Y.

Republic
REPUBLIC STEEL
REG. U.S. PAT. OFF.
HIGH STRENGTH STEELS
ALDECOR · COR-TEN · DOUBLE STRENGTH

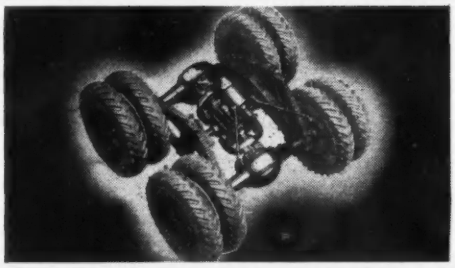
Other Republic Products include Carbon, Alloy and Stainless Steels—Sheets—Plates—Pipe—Bars—Wire—Bolts, Nuts and Rivets

DETROIT AUTOMOTIVE PRODUCTS CORPORATION



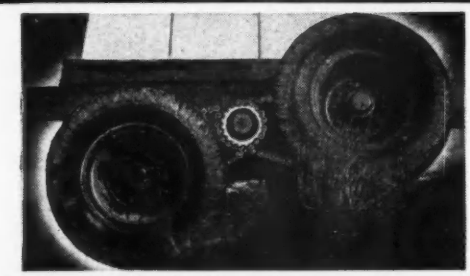
NoSPIN Differential

With a NoSPIN differential installed in your truck axle, your vehicle can't get stuck in mud, snow or ice due to loss of traction under one wheel, because both rear wheels must rotate. Greater driving safety, less tire wear.



THORNTON DRIVE

It makes a heavy duty six wheeler (up to 32,000 G.V.W.) out of a medium 1½-2 ton truck. Four independently-driven rear wheels increase the capacity and earning power of your truck 100%—yet it costs much less than a heavy-duty 4-wheeler of equal capacity.



Chain Drive-*Coming Soon!*

Watch for this revolutionary new chain drive that will make your heavier chassis a six-wheeler with a G.V.W. up to 44,000 lbs. Maximum traction from four-rear-wheel positive drive—high pay-load capacity—low maintenance cost—peak performance under the most exacting conditions.



HELPING YOU

Helping you pull bigger pay-loads at lower cost, giving you more capacity, better performance, increased safety, more working days—that's what Detroit Automotive products will do for you.

DETROIT AUTOMOTIVE PRODUCTS *Corporation*

formerly **THORNTON TANDEM CO.**

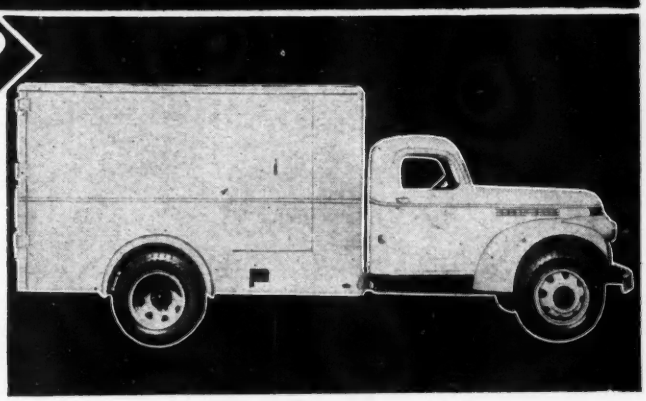
8701 Grinnell Avenue • Detroit 13, Michigan

***Distributors:* In U.S.A.–TRUCKSTELL DISTRIBUTORS *Export*–HERTHORNWAY EXPORT CORP.**

TRAVELING SALESMEN...



or JUST TRUCKS?



PALM BROTHERS *Decals* MAKE THE BIG DIFFERENCE

A truck is just a truck—unless it "sight sells" your products or services!

Successful fleet men everywhere know from experience that Palm Brothers Truck Decals mean business—creating literally millions of sales impressions.

You, too, can take profitable advertising advantage of the space on your panels, doors, tops, hoods and fenders with handsome Palm Brothers Truck Decal letters and decorations. Your trademarks, company name, and products are faithfully reproduced in color. They will outlast the life of your truck paint job, regardless of weather and operating conditions.

Easy, overnight application saves money and "down time". The original cost per truck unit is considerably less than hand painting, and uniformity of decoration for each unit is assured.

If your fleet consists of ten or more units, look to Palm Brothers Truck Decals (your public does!) for top quality at comparable prices.

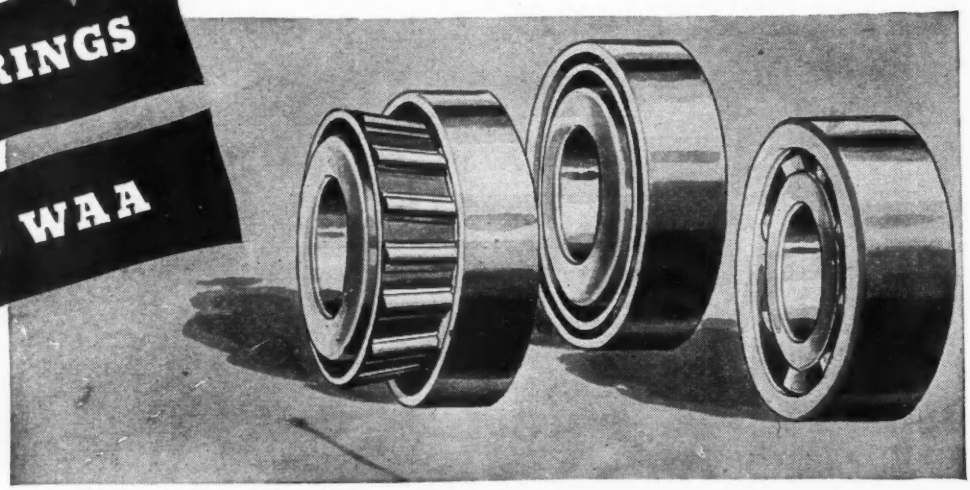
THE PALM BROTHERS *Decalcomania Co.*
CINCINNATI...12...OHIO...U.S.A.

Write today to Department M-4 for complete information, or if you prefer, a factory-trained representative will be pleased to assist you. Our complete art, designing, and technical services are always ready to serve you.

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START ROLLING ON BEARINGS FROM WAA

SET YOUR OWN PRICE IN SEALED BID SALES





Get your bearings from the $20,000,000 stock now being sold by WAA. Friction and anti-friction bearings and components in all sizes and types are included in this stock. Many sizes are available in production-run quantities. Set your own price on what you need and submit your bid. Get all pertinent information from your nearest WAA Regional Office—go there to make your own inspection.

OFFICE OF GENERAL DISPOSAL

WAR ASSETS ADMINISTRATION

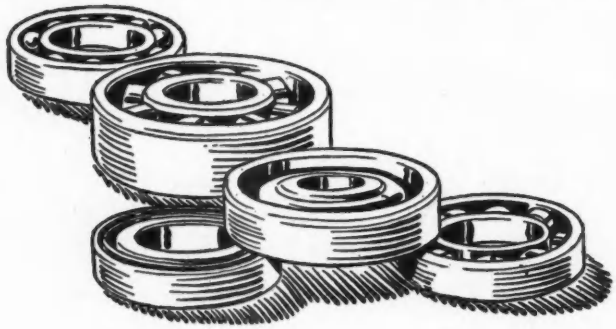
GOVERNMENT SURPLUS WAA

Offices located at: Atlanta • Birmingham • Boston • Charlotte • Chicago Cincinnati • Cleveland • Dallas • Denver • Detroit • Fort Worth • Helena • Houston Jacksonville • Kansas City, Mo. • Little Rock • Los Angeles • Louisville • Minneapolis Nashville • New Orleans • New York • Omaha • Philadelphia • Portland, Ore. • Richmond Salt Lake City • St. Louis • San Antonio • San Francisco • Seattle • Spokane • Tulsa

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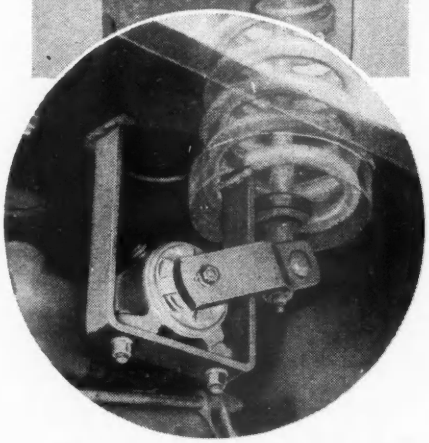
Sales of bearings will be held at frequent intervals. To receive information on future sales, write, wire or phone the Regional Offices listed below asking that your name be placed on their mailing lists.

BOSTON • CINCINNATI • CHICAGO • ST. LOUIS CLEVELAND • LOS ANGELES • NEW YORK









Two typical examples of the adaptability of Houdaille Hydraulic Shock Absorbers to seat control.

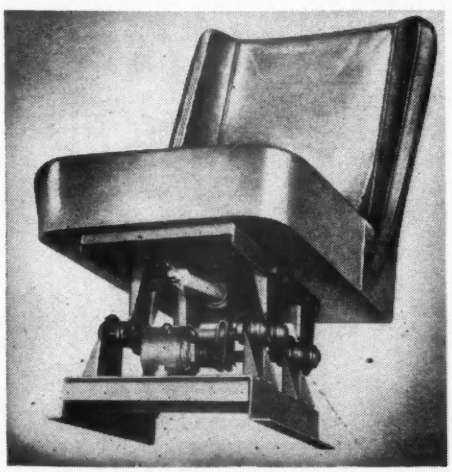
Seats

need Shock Absorbers, too!

It was nearly fifteen years ago that Houdaille* Hydraulic Shock Absorbers first proved their efficient practicability when used for seat control on vehicles destined for the toughest of rough riding.

Since then Houdaille engineers have cooperated with many manufacturers in planning seat applications for tractors, trucks and buses. Invariably, the result has been greater driver comfort contributing to increased alertness, efficiency and safety.

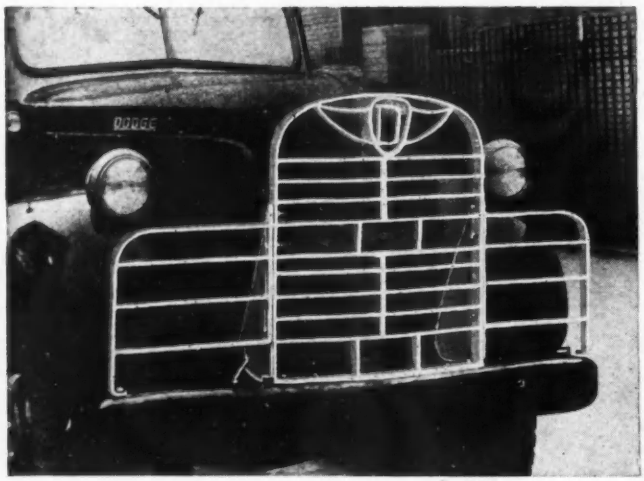
Houdaille is ready to place its experience in this field at the disposal of any manufacturer contemplating new seat designs.

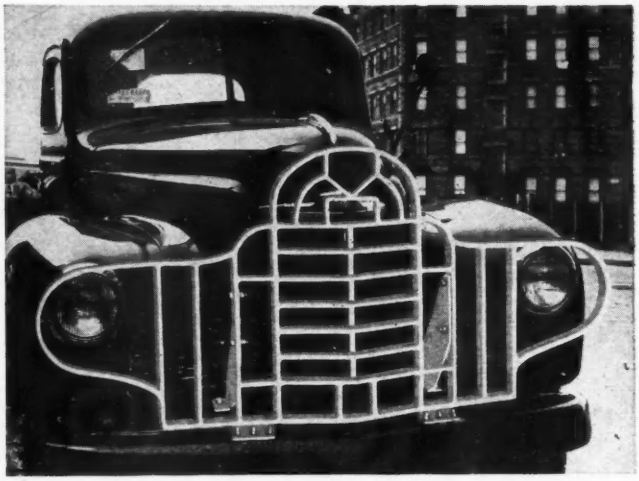


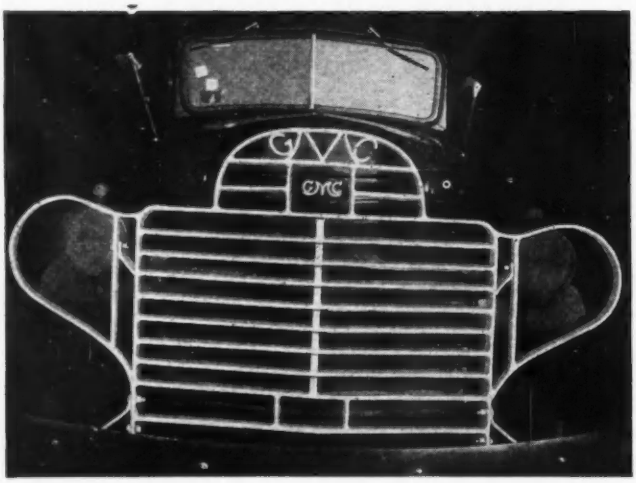
HOUDE ENGINEERING DIVISION OF
HOUDAILLE-HERSHEY CORPORATION
MAKERS OF HYDRAULIC CONTROLS
BUFFALO 11, N.Y.

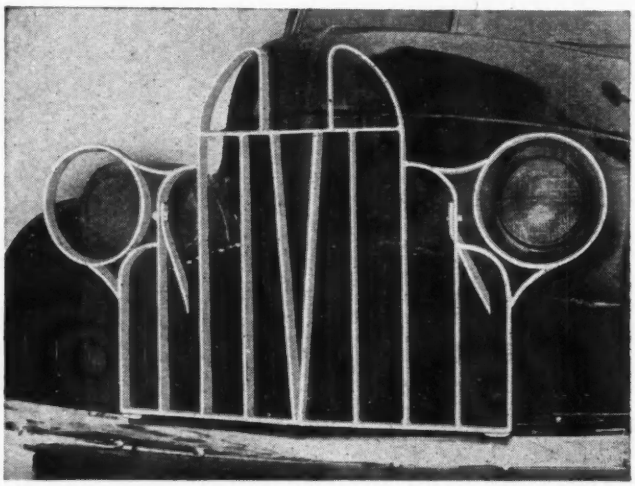
*Pronounced Hoo-dye

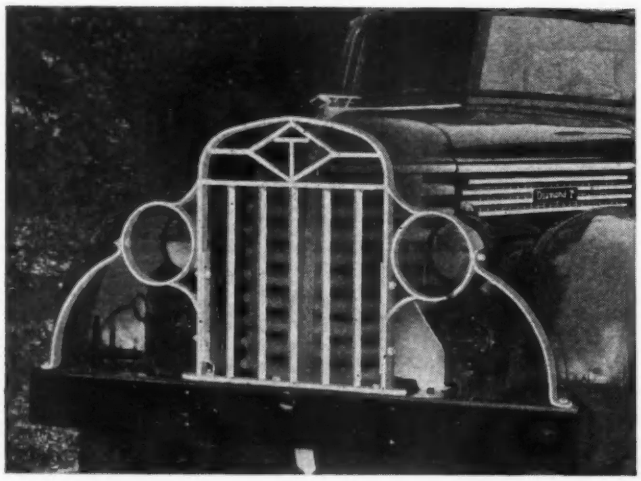
A Better *GRILLE GUARD *by* BUSTIN

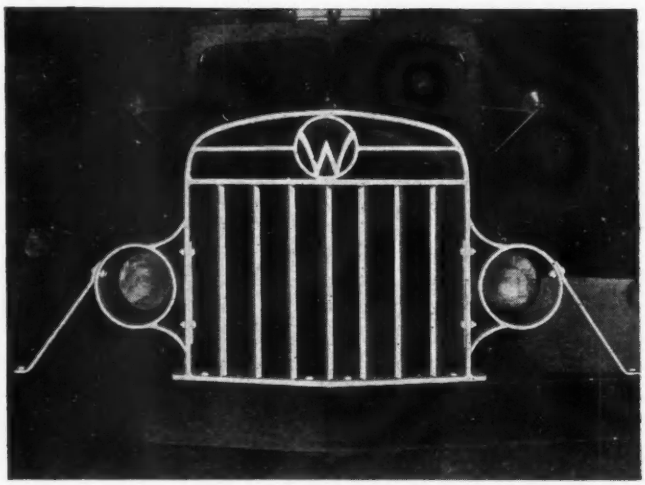












*Pat. Pend. Designs

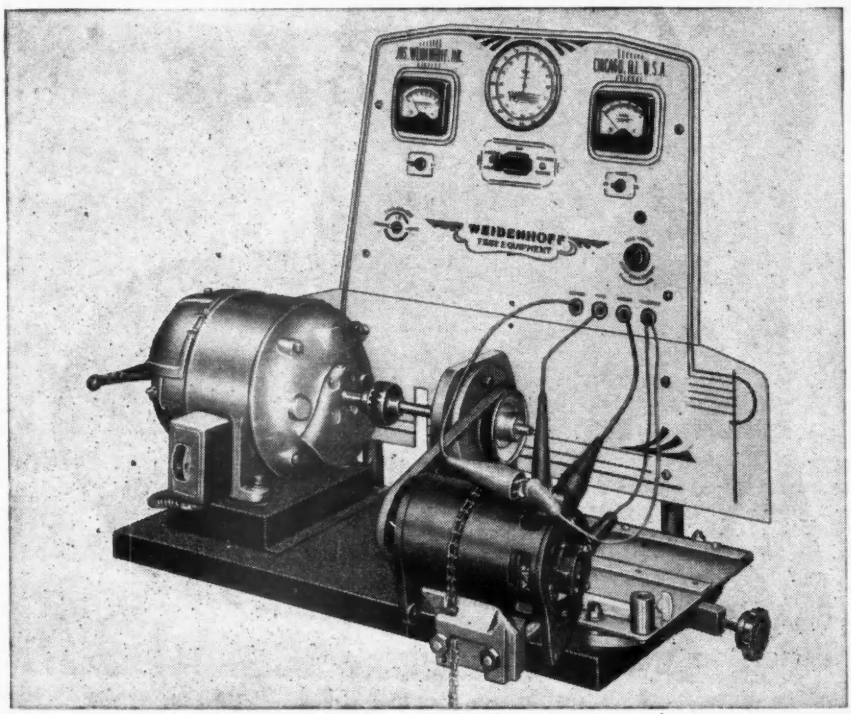
INDIVIDUALLY Styled and made for most 1946-1947 models. Special Mounting Plates on most Designs for Simple, Fast and Sturdy installation.

BUSTIN IRON WORKS Inc.

110 EAST 130th STREET, NEW YORK 35, N. Y.
ATwater 9-2200

WEIDENHOFF

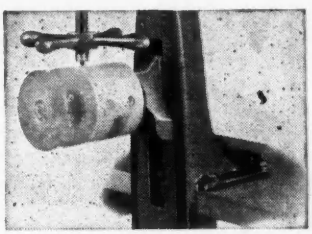
Electrical Testing & Service Equipment



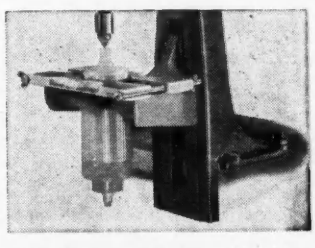
Model B-374 test bench with generator on test. Only three connections are necessary to externally controlled units.



The new Model B-966 press and pole piece screwdriver combination. Needed in every shop.



Removing or replacing parts.



Removing or replacing pole piece screw.

Large fleet shops which are now equipped with the Weidenhoff Model B-501 Generator and Starting Motor Test Bench (two-speed gear transmission type) which handles large, heavy-duty generators, will find the Model B-374 Test Bench, pictured above, ideal to supplement the work of the large bench.

The motor of the Model B-374 drives generators under load at speeds in excess of actual operation, which provides a factor of safety to insure correct performance when reinstalled on the motor vehicle. Checks generators with regulators, too.

The new combination puller press and pole shoe screwdriver is a "natural". Fine screw thread gives a lot of power, without danger of stripping threads and large handwheel produces flywheel effect helping to spin screw in or out rapidly. No end to the great variety of work this unit can handle.

ENGINE ANALYZERS • BATTERY CHARGERS • MAGNETO TESTERS

JOSEPH
WEIDENHOFF
INC.
CHICAGO 24, ILLINOIS

AUTOMOTIVE SERVICE WEIDENHOFF EQUIPMENT AVIATION

TEST BENCHES • ELECTRICAL TESTING AND SERVICE EQUIPMENT

COMMERCIAL CAR JOURNAL

The NUMBER 1 *Magazine in the* TRUCK FLEET FIELD

COMMERCIAL CAR JOURNAL is the leading publication in the truck fleet field. Its total monthly print is 32,000. It reaches nearly 27,000 truck fleet executives in the 25,000 largest truck fleets in the world.

COMMERCIAL CAR JOURNAL—and no other publication in the field — in addition to truck fleets offers 4,000 PAID ($5 per year) trade circulation among truck manufacturers, truck branches, truck dealers, service stations, truck body manufacturers, equipment distributors, etc.

A CHILTON Publication

COMMERCIAL CAR JOURNAL

COMMERCIAL CAR JOURNAL leads in reader interest and preference, in advertising carried and in editorial excellence. Its advertisers' index is a "WHO'S WHO"of the industry, because *advertising in it pays.*

Chestnut and 56th Streets, Philadelphia 39, Pa.

TRUCK BODY DISTRIBUTORS....

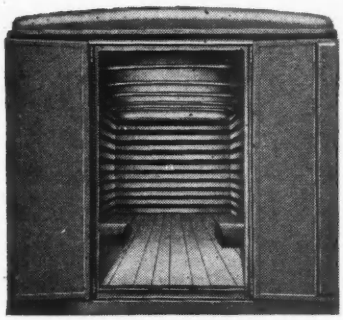
Here's the *Answer* to Supplying the *BIG* TRUCK BODY MARKET!



PROFITS UNLIMITED
FOR BODY SHOPS, DEALERS, DISTRIBUTORS

3 LENGTHS
2 WIDTHS

OPTIONAL SILL MOUNTED or WHEELHOUSE TYPES

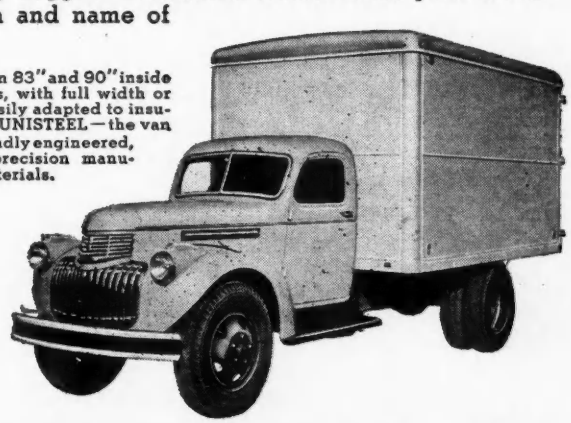


ROOMY INTERIORS
Note spacious interior of UNISTEEL body, metal wheelhouses, full slat lining, hardwood floor, sturdy metal faced doors.

"CASH IN" NOW SELLING THE UNISTEEL VAN TRUCK BODY

Handsome PROFITS await those who supply the huge, hungry delivery truck market with UNISTEEL van bodies! If you're a body distributor or local body shop having the simple facilities required to assemble these precision fabricated bodies, here's the quick—easy—profitable way to supply your region with today's outstanding van truck body value. It's a simple and fast job to assemble knock-down UNISTEEL bodies. Some choice assembly-distributor territories are still open...so send for complete details NOW! Or, if you're a truck dealer, you'll find real profit—plus customer satisfaction and good-will—in selling modern, rugged UNISTEEL bodies with your truck chassis. Write for information and name of distributor serving your area.

Available in 12, 14, and 16 foot lengths, in 83" and 90" inside widths, wheelhouse or sill mounted types, with full width or center rear doors, optional side doors. Easily adapted to insulated, refrigerated, or special needs. Sell UNISTEEL—the van truck body that's soundly engineered, neat and modern, precision manufactured of finest materials.



UNISTEEL VAN TRUCK BODIES

FOR COMPLETE DETAILS PHONE, WIRE or WRITE— **MIDWEST EQUIPMENT CO., Delphos, Ohio**

THE FABRICATED TRUCK BODY MOUNTABLE ON ANY CHASSIS

Time for a

Spring Check-up . . .



on the plan that delivers Peace of Mind

THANKS to the work of patriotic volunteers, the U. S. Savings Bonds program has carried America a long way up the road to economic security.

During 1946, in spite of all the problems and uncertainties the nation faced, sales of Savings Bonds *exceeded redemptions* by $1,389,216,000. The success of this great sales operation has helped stem the tide of inflation, has reduced public debt holdings of the banking system, and has given millions of citizens a stake in their country and a profitable investment in their own futures.

Yes, we've come a long way—but the trip isn't over! Now is the time to check up on your Payroll Savings Plan. Make sure that all your new employees are familiar with its advantages. Remind *all* your employees that there's no easier, surer way to build their own futures—and America's—than by buying Bonds regularly through the Payroll Savings Plan. Every $3 invested pays $4 at maturity!

For any help you need in conducting the Payroll Plan, call on your State Director of the Treasury Department's Savings Bonds Division.

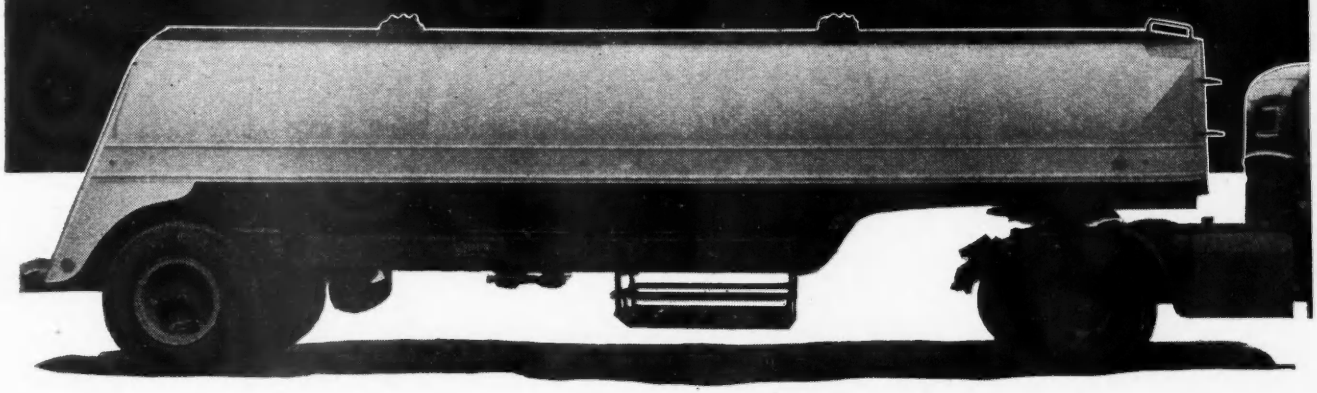
New Savings Bonds Plan won't affect the P.S.P.

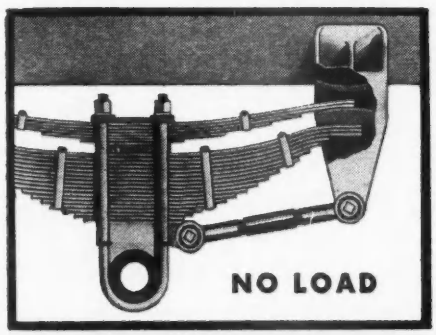
SOON the Treasury Department and the banks of America will make it possible for farmers, doctors, and other self-employed people to participate in "automatic" Bond buying by special arrangement with their banks. This extension of the Savings Bonds program is not a partial payment plan and is intended *only* for people who are not in a position to take advantage of the Payroll Savings Plan.

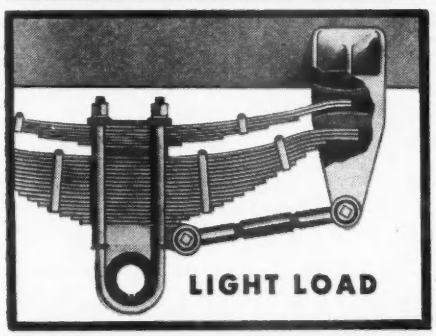
The Treasury Department acknowledges with appreciation the publication of this message

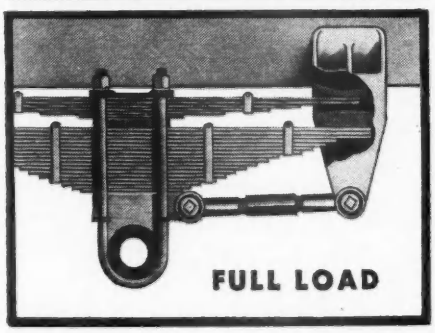
This is an official U.S. Treasury advertisement prepared under the auspices of the Treasury Department and The Advertising Council.

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To Be Sure . . .

It's Weld-Bilt

GET a Great Dane—built to your own exacting requirements within I. C. C. specifications. Strongest, Lightest and most practical construction assures increased pay loads and long life. When your Tanker is a Great Dane, you know it's WELD-BILT.

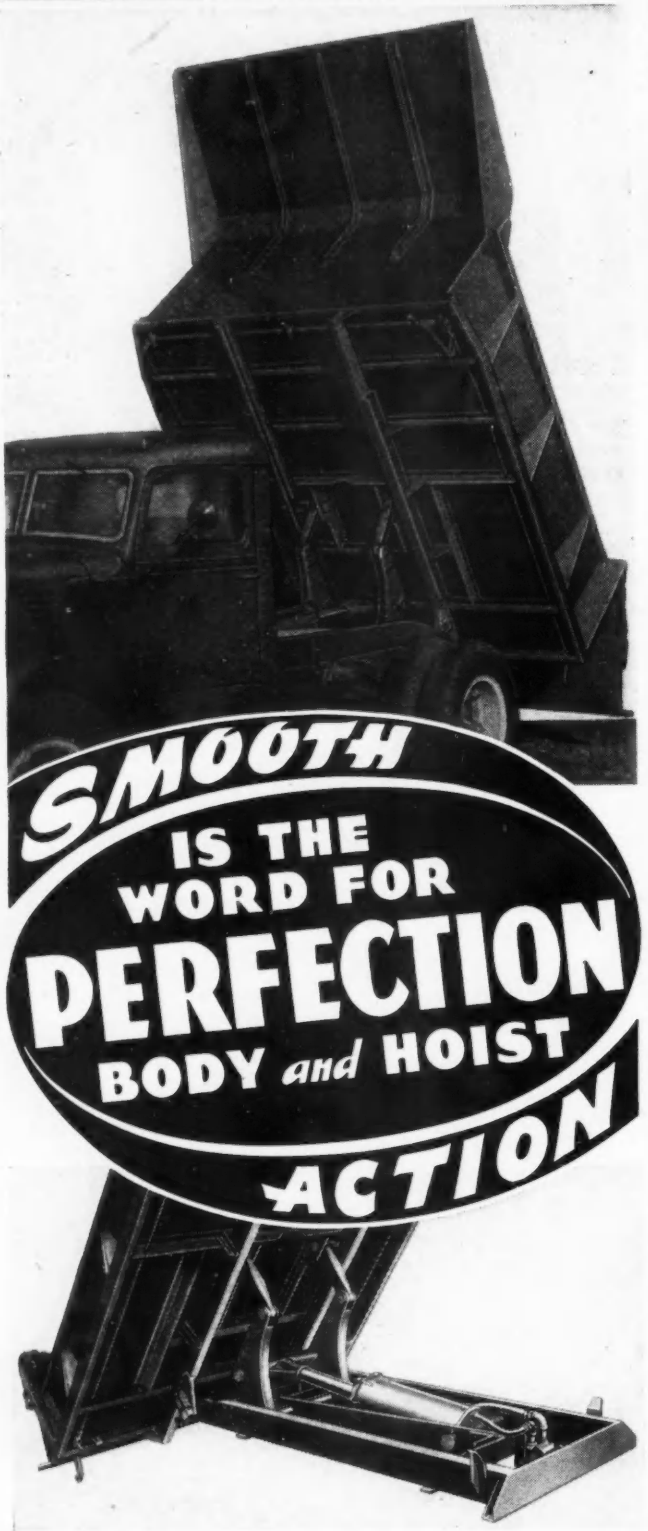
PROMPT DELIVERIES

Great Dane's Spring Suspension is an exclusive and original feature, Prevents YAW, curtails rebound, provides longer tire life. NEW Tamper-Proof Torque Rod guarantees perfect alignment.



The STEEL PRODUCTS CO., *Inc.*
SAVANNAH • GEORGIA

USED THE WORLD OVER



SMOOTH
IS THE WORD FOR
PERFECTION
BODY and HOIST
ACTION

Write for name of nearest Perfection Distributor

THE PERFECTION STEEL BODY COMPANY
GALION, OHIO

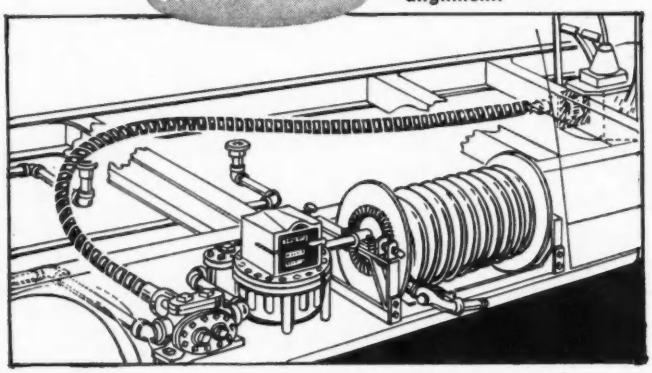
PERFECTION
STAKE and DUMP BODIES
HYDRAULIC HOISTS

FOR ANY TRUCK
STANDARD or SPECIAL UNITS
IN ALL SIZES • FOR ANY USE

Here's Reliable POWER for TANK TRUCKS with STOW Flexible Shaft
TANK PUMP DRIVE

Where pumps either at side or rear locations are equally protected against drive misalignment.

ON TANK TRUCKS



SOME OF THE REASONS WHY!

1. The smooth working of the Stow Flexible Shaft minimizes wear.
2. Requires less piping — cuts piping costs — fewer joints result in less leakage!
3. Stow Flexible Shaft automatically compensates for relative movement between the pump and power take-off resulting from distortion of the chassis frame caused by uneven roads!
4. Location of pump in accessible places permits ease of service.

TANK TRUCK OPERATORS!

STOW, pioneer in the development of the flexible shaft principle, has complete engineering data on tank pump drive installations.

YOURS ON REQUEST
Ask for Bulletin!

STOW MANUFACTURING CO.
38 SHEAR ST. BINGHAMTON, N. Y.



A Clean Fleet is GOOD BUSINESS!

Clean trucks and buses are good advertising for the firm whose name they carry. Flour City brushes are the answer for a speedy, clean wash. The long handle and fountain head with tough, close-set bristles make it easy to reach all surfaces and remove the toughest dirt.



Cleans with Constantly Flowing Water

"Bus Wash"

This round type brush is made in two grades, **No. 650H** with horsehair bristles—**$7.95. No. 650BM** with imported pig bristles—**$12.75.** Both brushes have round, cast aluminum head 5" in diameter, with 4' hollow seamless steel handle equipped with brass fittings.

"Fleet Wash"

This is an oblong type brush with a cast aluminum head 2⅞" wide by 10" long. The imported pig bristles 3¼" long, flare to a 12" cleaning surface. The 4' handle is hollow, seamless steel equipped with brass fittings. **No. 366—$14.75.**

"Auto Wash" for passenger cars and light trucks—8½" handle, 3½" round head, $3.95

Replaceable Head

No need to buy a whole new brush when the bristles wear out. The head is replaceable on an exchange basis at a fraction of the original cost.

If Your Jobber Cannot Supply You — Write Direct Giving Name of Jobber

FLOUR CITY BRUSH CO. • MINNEAPOLIS 15, MINNESOTA
PACIFIC COAST BRUSH CO. • LOS ANGELES 21, CALIFORNIA



Master stock in 39 strategically located warehouses. Jobbers everywhere maintain complete assortments.

NAPA National Automotive Parts Association Assurance of Quality

BUY THEM TODAY TO STOP TOMORROW'S FIRE

• With truck, garage and shop replacements still hard to get and much higher in price, it's time to double-check your fire-fighting equipment.

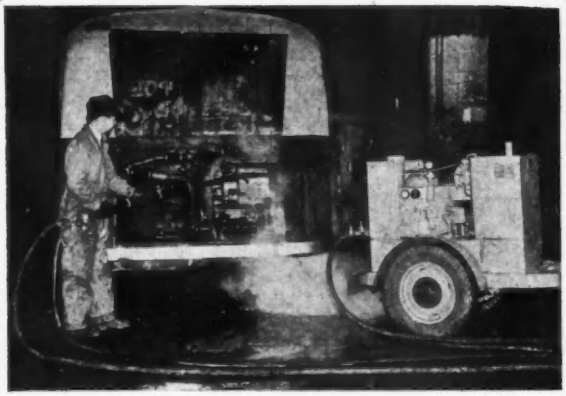
Is every vehicle and every vulnerable garage and shop location covered by the *right* type of extinguisher? Is every extinguisher freshly charged...for instant action.

Our representative in your locality has new stocks of Buffalo *better-built* Fire Extinguishers...a type and size for every fire hazard. Where "VL" extinguishers are required, we suggest the 1½ quart size ...nearly double the protection at little added cost.

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CORPORATION
DAYTON 1, OHIO

Established 1895

BUFFALO better-built **FIRE EXTINGUISHERS**



Speed Up Your Overhaul Jobs With the New Oakite-Vapor Steam-Cleaning Unit

IN OR OUT of your service shop . . . the Oakite-Vapor Unit gives you potent cleaning power whenever you want it. Just flick the switch, and in one minute the Unit generates 100 lbs. of steam for you (rated capacity 200 p.s.i.). Fuel capacity provides 8-hour non-stop cleaning, degreasing, paint-stripping. One- or two-gun cleaning action. No coil clogging because cleaning solution by-passes coils. Vibrationless operation. Mobile and stationary models available for immediate delivery.

SPEED: Degreases blocks, motors, axles; cleans chassis, springs, oil pans—quickly. Helps you clear crowded repair shops easily. Gets your rolling stock back on duty fast. Helps mechanics and maintenance men cut hours off cleaning time.

EFFICIENCY: Watch your mechanics turn out better work when surfaces are 100% clean. Cleaning with the Oakite-Vapor Unit simplifies flaw inspection. Properly prepares surfaces for repair or repainting. Your best bet for all-around low-cost cleaning.

ON-THE-SPOT cleaning. No installation of steam lines necessary. In and around the garage, the Oakite-Vapor Unit saves you money by slashing cleaning time. To see the Unit in action, call your nearby Oakite Technical Service Representative today. Or send for illustrated folder.

OAKITE PRODUCTS, INC., 26D Thames St., NEW YORK 6, N. Y.
Technical Representatives in Principal Cities of U. S. & Canada

OAKITE
REG. U. S. PAT. OFF.

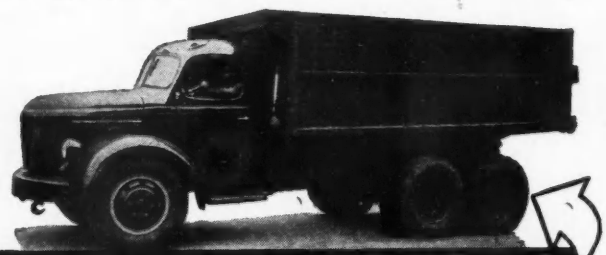
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MATERIALS • METHODS • SERVICE

G&O
Radiators
82nd Year

They're Good

THE G & O MANUFACTURING CO.
NEW HAVEN **CONNECTICUT**

LITTLE GIANT
TEN WHEELERS **FRAME EXTENSIONS**



DOUBLES the Payload

Increases hauling capacity up to 20 tons—reduces tire wear, fuel costs and overhead. Flexible trunion spring suspension gives positive traction over the roughest of ground. Keeps load in perfect balance—no tester or end-sway. Wheels, hubs, bearings and brakes are interchangeable with regular truck equipment. For 1½ to 5-ton trucks. Easy to install in 3 hours. A leader for 19 years. WRITE.

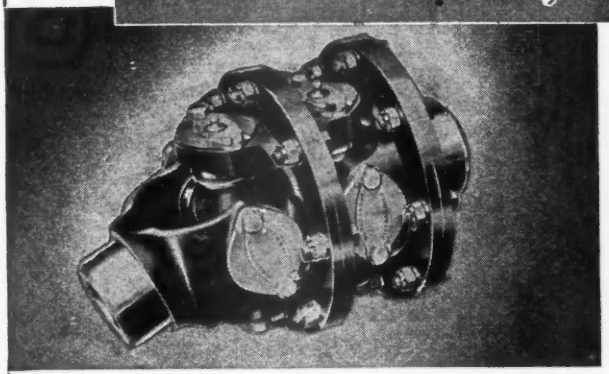


Adds any desired length to chassis. Cut-frame and slip-on types. Easily installed. Strengthens the frame. Dependable—thousands in use.

Prompt delivery—write for low dealer prices and details

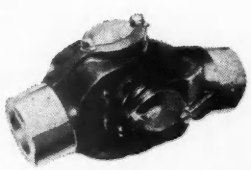
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Flexibility



For years, Blood-Brothers engineers have been "taking power around corners" for the automotive industry. They know how to build flexibility into your power transmission designs, flexibility which is dependable. That's why you can depend on Blood-Brothers Universal Joints for great torsional capacity, stamina and trouble-free performance.

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TAKES POWER AROUND CORNERS

BLOOD-BROTHERS MACHINE COMPANY

ALLEGAN, MICHIGAN

Universal Joints

Division of Standard Steel Spring Co.



Fitzgerald

GASKETS

...keep the payloads rolling

TOUGH Fitzgerald gaskets, backed by more than forty years of experience keep your cars out of the repair shop . . . out on the road where the profits are. Made of the finest materials by the best construction methods, they give longer service . . . ask your Fitzgerald Jobber for full particulars.



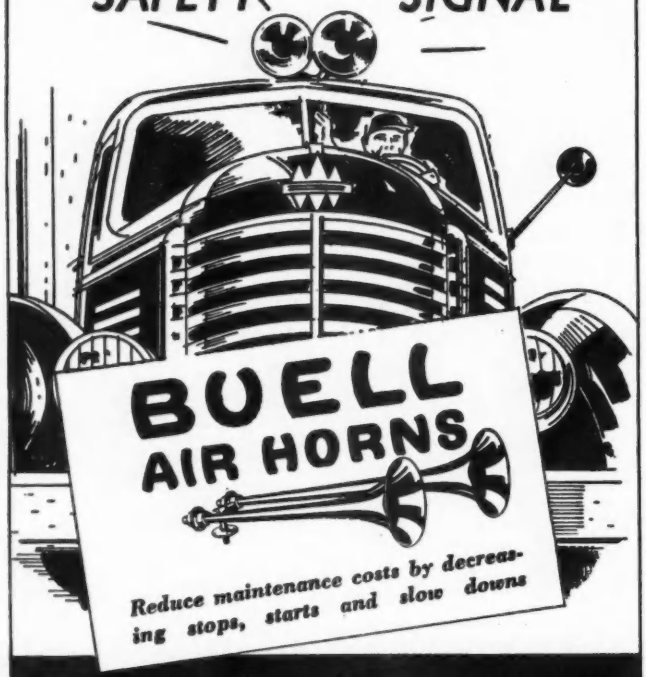
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Branches at Chicago and Los Angeles
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FITZGERALD GASKETS

GASKET CRAFTSMEN SINCE 1906

THE TOP SAFETY SIGNAL



BUELL MFG. CO., CHICAGO 16

Warning Signals Since 1912

2988 COTTAGE GROVE AVENUE

TRUCKERS!

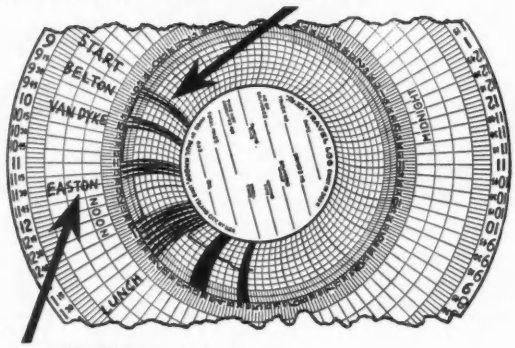
KEEP 'EM ROLLING FOR COST ECONOMY VIA

The "PE-KA" TRAVEL LOG WAY

This recording instrument is not actuated by vibration but is driven in the same manner as the speedometer, thus enabling you to derive the following information *accurately:*

1 Average speed of the vehicle.
2 Number of stops and their duration.
3 The REASON for each stop.
4 Distance traveled between each stop.
5 Start and finish of daily runs.

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The DRIVER Writes

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with the NEW FLUSH Type Clear View PLASTIC METERS



MT-555

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MILEY

METALLIZED

Black Gold

Brake Lining is non-scoring – non-squeaking – grease, oil and water proof.

L. J. MILEY CO.

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AS YOU CHECK YOUR TIRES & OIL

"Good Brakes Promote Safer Highways"

SCANDINAVIA BRAKE LININGS

FOR ALL ROADS AND LOADS

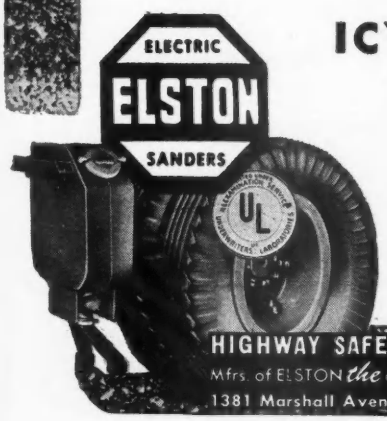
SCANDINAVIA BRAKE LININGS

DIVISION OF SCANDINAVIA BELTING COMPANY

250 CENTRAL AVENUE, NEWARK, NEW JERSEY — *Plant:* CHARLOTTE 1, N. C.

BOSTON • CLEVELAND • JOHN L. HALL CO., 625 N. W. COUCH STREET., PORTLAND 9, ORE.

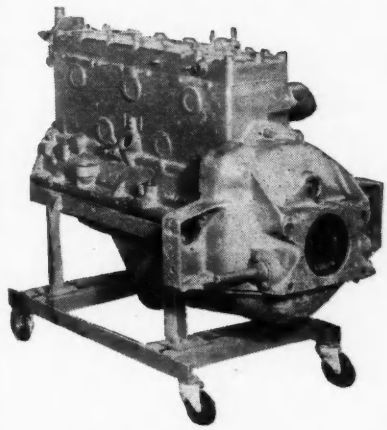
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Flip of dashboard switch automatically pre-sands highway ahead of drive wheels. Maintains safety . . . assures schedules. Write for free informative folder today!

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Mfrs. of ELSTON *the original* ELECTRIC SANDER
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TEARDOWN - STORAGE - DISPLAY



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NO. 753 TO 1,000 LBS. CAPACITY
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An ideal, "all purpose" single engine dolly that is proving very popular. The adjustable side rail feature makes it adaptable to practically all engines to 2,000 lbs. May be used for teardown and assembly of parts and accessories. Ideal for engine display as well as storage. Constructed of heavy angle stock, and equipped with heavy duty casters.

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SUCCESSOR TO BENDIX PARTS CLEANER



BENDIX PRODUCTS DIVISION of Bendix AVIATION CORPORATION
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AIRBRAKE HOSE ENDS



Made by
a nationally famous manufacturer

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Brass couplings with ¼" or ½" pipe threads. Will fit all tractors using air brakes

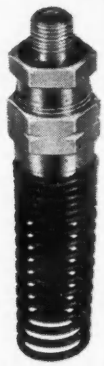
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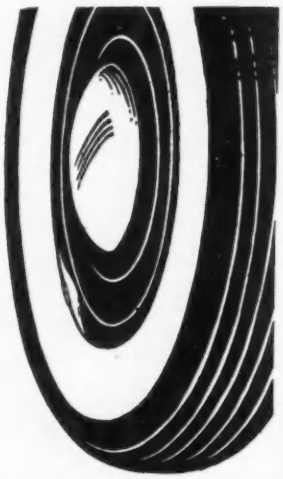
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AUTOMOTIVE
WHEEL BALANCING WEIGHTS

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DO-RAY LAMP COMPANY
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WHITEHEAD STAMPING CO.
EST. 1903



REPAIR ENGINE CRACKS IN 30 MINUTES . . . .

Repairs Cracked Blocks, Water Jackets, Valve Ports. Quick acting . . . works in 30 minutes. Easy to use . . . no special equipment or training needed.

Keep Wonder Seal always handy for an emergency. Ask your Jobber.

OFTEN IMITATED
NEVER EQUALLED!
WRITE FOR FOLDER



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GENUINE ALMETAL PRODUCTS

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Consult your local Almetal jobber for assistance on your Universal Joint problems.

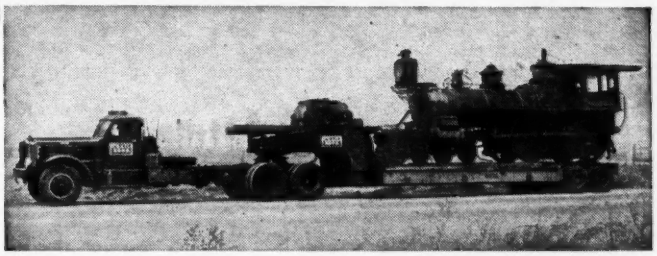
THE ALMETAL UNIVERSAL JOINT CO.
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Sterling MOTOR TRUCKS

Progressively Improved Since 1907

Rugged heavy duty models for highway transportation, hauling heavy machinery, mining, excavating, quarrying, logging, etc.

Gasoline and Diesel powered.
Four and six wheel chassis.
Enclosed and chain drives.



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16 to 24 inch
without hammering
with the
UNIVERSAL
Tire Removing Tool
$124.50
One tool does *all* jobs!



Remove Stubborn
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King-pin Puller
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Both items sold only through jobbers.
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For Your Fleet's Sake...

REPLACE *old type*
THERMOSTATS
with
DOLE
ADJUSTABLE
THERMOSTATS



At all seasons, a thermostat—which can be adjusted by one turn of a screwdriver—contributes to improved car and truck performance—with resulting savings in gasoline and oil . . . and reduced crank case dilution and engine wear. Include replacement with DOLE "Adjustables" as part of the next seasonal cooling system check-up.

THE DOLE VALVE COMPANY
1901-1941 CARROLL AVENUE CHICAGO 12, ILLINOIS
Representatives in Principal Cities

WIRE-GRIP HOSE CLAMPS
BATTERY HANGERS
HOLD DOWNS &
CARRIERS
STOP-LITE
SWITCHES

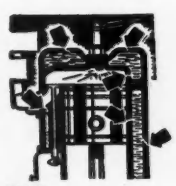


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MURRAY
You don't have to worry



MURRAY CORPORATION
TOWSON-4, MARYLAND

SEE YOUR JOBBER!



SEND $3 FOR FULL PINT PREPAID

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AVAILABLE ALSO in 4 oz. $1.00 bottles and in LUSCO SEALWEL CUBES 30c.

REPAIR CRACKED BLOCKS AND HEADS—
QUICKLY, EASILY AT LOW COST

Cut down costly repair time. Keep cars and trucks on the road. Repair external and internal leaks in blocks, cylinders, valve ports and radiators with amazing

LUSCO
PLASTIC SEAL

90 days' service guaranteed or your MONEY BACK. Send money order or check for full pint—more than enough for average repair job. Ask for quantity discounts and give name of your supply jobber.

C. F. LUSK CO. 5918 Bonna Ave., Cleveland, Ohio

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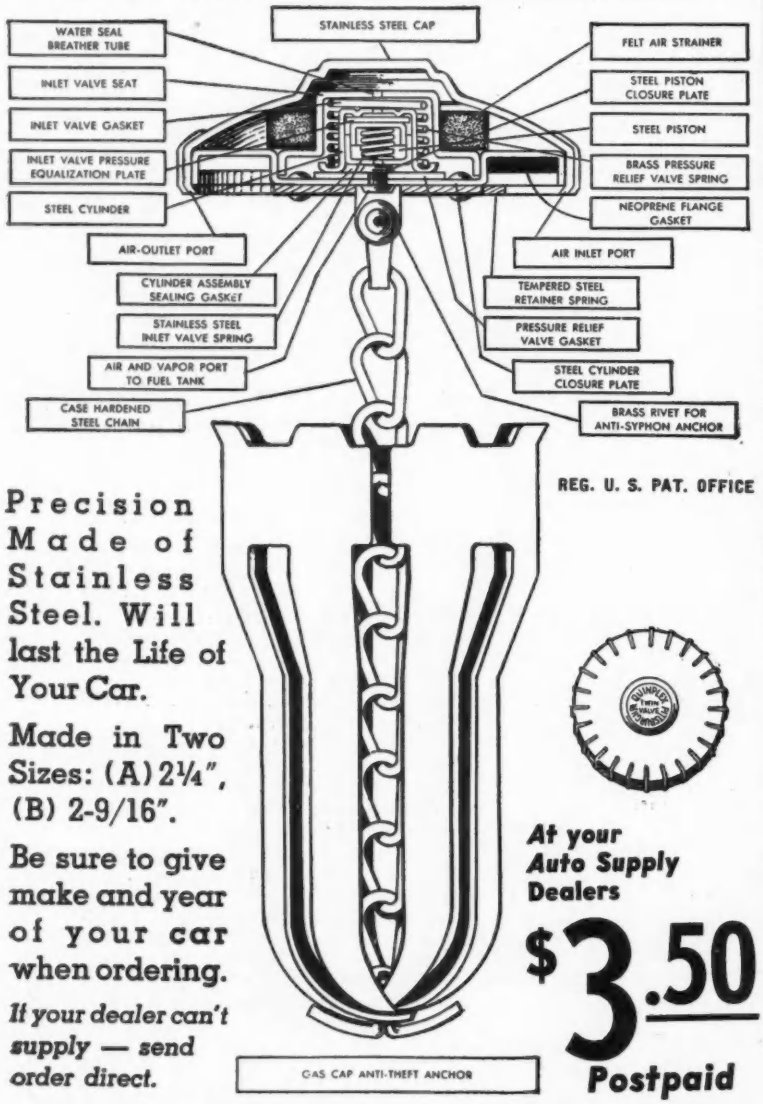
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Prevents theft of Gasoline and Cap! No Key Required! Easily Installed in 3 Minutes! No Tools Required!



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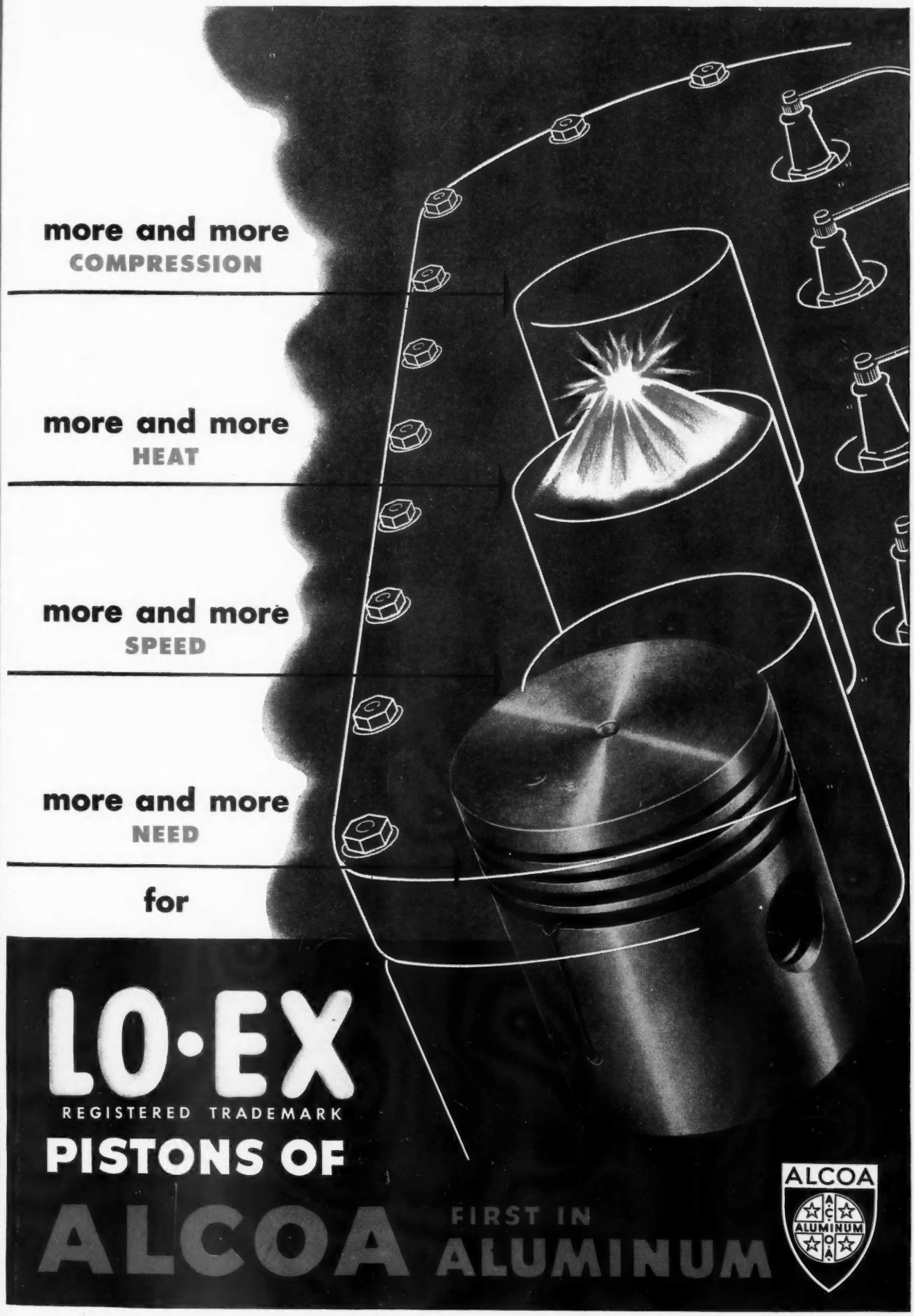
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FWD Trucks Provide Fast, Safe, Sure Transport of Heavy Machinery or Material...On or Off the Road

Hauling power shovels and other heavy machinery, huge loads of cement, bulky loads weighing 50 tons or more — those heavy-duty hauling jobs are usually entrusted to FWD four-wheel-drive trucks.

The safety and surety — the reliable pulling power of four or six driving wheels — the ability to move the load to location on or off the highway — these FWD advantages count heavily in this and other heavy-duty trucking operations.

Wherever motor truck performance must be more than usually dependable — in heavy hauling, in highway or municipal service, in utility line construction and maintenance, in oil-field operations — FWD four-wheel and six-wheel-drive trucks are rendering important service.

THE FOUR WHEEL DRIVE AUTO COMPANY
CLINTONVILLE, WISCONSIN
Canadian Factory: KITCHENER, ONTARIO

America's Foremost **FWD** *Heavy-Duty Truck*

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AND
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Both "V" TYPE and ONE WAY BLADE TYPE
hand or power hydraulic control
FOR ALL MOTOR TRUCKS FROM 1½ to 10 TONS
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FRINK SNO-PLOWS OF CAN. Ltd., TORONTO, ONT.

CCJ Newscast

(CONTINUED FROM PAGE 386)

DRIVE SLOWGANS

(Some of the better non-prize-winning slogans submitted in the recent contest conducted by the American Trucking Associations, Inc.)

DRIVE TO SURVIVE

* * *

Anytime, Anywhere, Take Care

* * *

There's a YOU in Caution

* * *

Careful Drivers—Safe Arrivers

* * *

Everyone Gains Where Safety Reigns

* * *

Be Wise Don't Jeopardize

* * *

SWEET AND SLOW

* * *

Economize by Driving Wise

* * *

Careful Today, Carefree Tomorrow

* * *

Courtesy Costs Nothing—Safety Is Priceless

* * *

REMEMBER THE MAIMED

* * *

Use Your Eyes, Your Ears, Your Knows

* * *

Remember To Say I'll Be Careful Today

* * *

LOOK BEFORE YOU LIMP

* * *

Stop a Minute, Not Forever

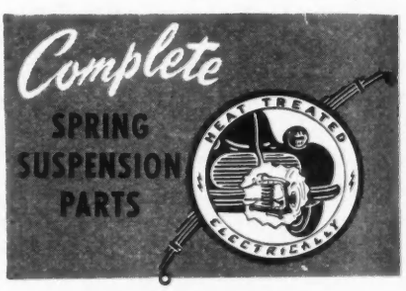
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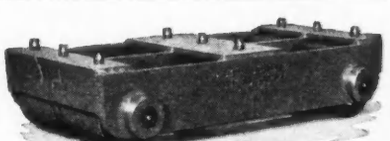
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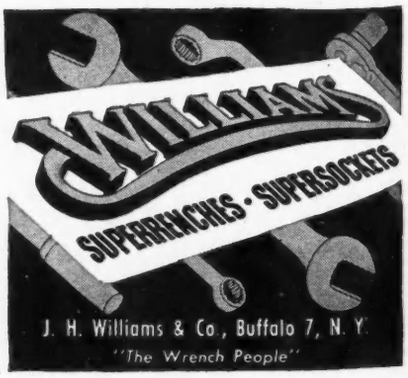
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ST. LOUIS, MO.



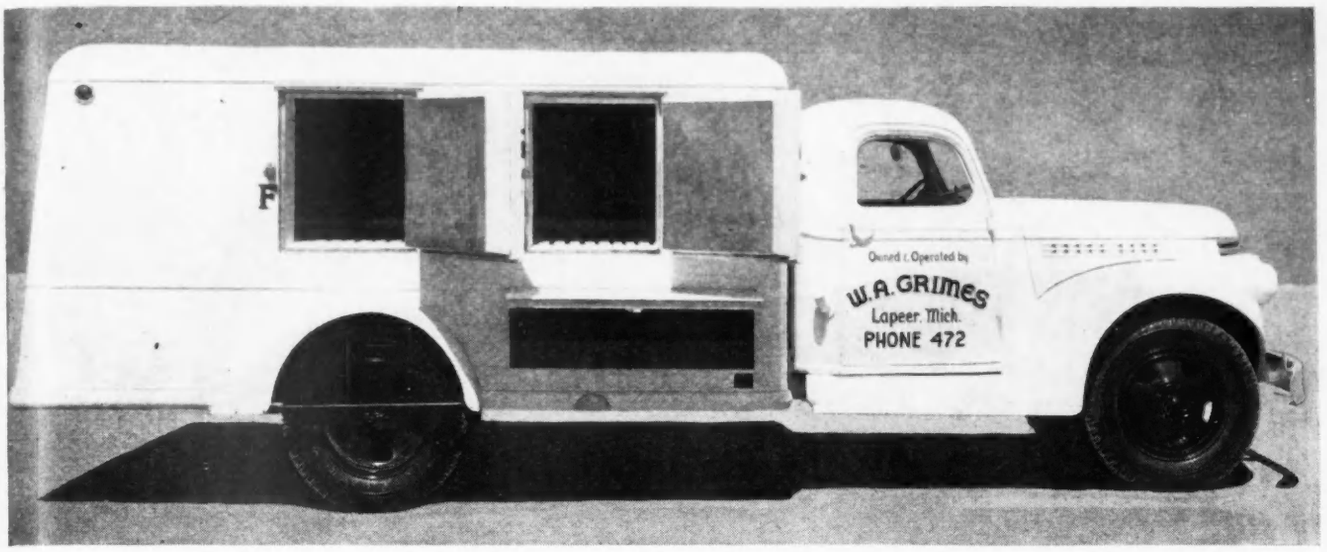
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..... CCJ



J. H. Williams & Co., Buffalo 7, N. Y.
"The Wrench People"



Swift Body and Equipment Co. of Saginaw, Michigan, built this refrigerated truck body from Parish Universal Body Sections.

PARISH Offers New "Highs" In

BODY APPEARANCE, UTILITY AND ECONOMY

Parish makes it possible for body builders to supply truck fleets with strong, lightweight truck and trailer bodies which are individually engineered and built for the job each truck has to do.

This is possible because of Parish's *exclusive, complete* line of prefabricated, high-tensile steel body sections which contain all of the engineering features developed at Parish since its first pioneered Universal Body Sections. It is no accident that Parish has the largest and most complete set-up of tools and equipment for the production of truck and trailer frames and body sections.

Hundreds of body builders are using Parish Body Sections because of the following features they make possible in truck and trailer bodies:

- **Individualized Design.** The wide variety and adaptability of sections in the Parish line make it possible to build bodies ideally suited for every specialized type of truck service.
- **Attractive Appearance.** Each section has been designed to provide stream-lined body exteriors and interiors.
- **Simplified Layout.** Made possible by the "Erector Set" principle followed in the Parish B line.
- **Quicker Delivery.** There is a 50% saving in assembly time when using Parish sections because of their engineering features. Some of these are prepunched holes on accurate synchronized centers, holes to accommodate the riveting of panel sheets, roof moldings which are integral with the roof caps and unit sub-assemblies of roofs, ends and doors.
- **Strength Without Excess Weight.** High-tensile steel is used throughout. Sections are tapered or adjusted in weights and gauges to keep upper portion of the structure light. Other features contribute to strength, such as flare bottom post bases which reinforce posts at points of stress.
- **Easy Maintenance.** All functional parts are accessible so that repairs to individual sections can be made with a minimum of tear-down.

Body manufacturers are invited to write for our latest Body Section Catalogs A and B.

You can rely on the experience of the country's many leading automobile, truck, trailer and truck body manufacturers who use Parish Products. It Pays To Specify PARISH

Pressed Steel Heat-treated Frames for automobiles, trucks, tractors and trailers and Universal Body Sections.

PARISH PRESSED STEEL CO. *Subsidiary of* **DANA CORP.**
READING, PA.

Western Representative: F. Somers Peterson, 57 California St., San Francisco, Cal.

A HOT TIP ON TROUBLE-FREE TRUCKING



USE KESTER Cored SOLDERS

The pay-off depends on top performance when the load is heavy and the road is long. Make dependable repairs with Kester Cored Solders and guard trucking operations against the heavy cost of breakdowns and delays on the road.

Whether the haul calls for smooth cruising over a super highway or grinding over the ruts and rocks of a neglected side road, Kester Cored Solders hold tight—withstand shock, vibration, twisting, bending and the gruelling effects of weather extremes.

Application of Kester Cored Solder is quick, easy—virtually mistake-proof. The positive acting flux in the core makes it possible to complete the soldering job in one simple operation.

The consistent superior performance of Kester Cored Solders has made them standard for every automotive use. Their unvarying uniformity and high quality is the result of nearly half a century of practical experience and laboratory research.

Use Kester Cored Solders and keep payloads rolling on schedule. For electrical work, it's Kester Rosin-Core Solder; for general automotive soldering, Kester Acid-Core Solder. Order from your jobber today.

KESTER SOLDER COMPANY

4205 Wrightwood Ave., Chicago 39, Illinois

Eastern Plant: Newark, N. J.

Canadian Plant: Brantford, Ontario



KESTER Cored Solders

FOR EVERY AUTOMOTIVE USE

CCJ TRUCK SPECIFICATIONS TABLE

(Continued from Page 91)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES Standard Front and Rear	TIRE SIZES D-dual rear S-single rear Maximum Authorized Tire Size (Dash un-less noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	TRANSMISSION Forward Sp'ds	REAR AXLE Make and Model	REAR AXLE Gear and Type	REAR AXLE Drive X Torque	REAR AXLE Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operat'n	BRAKES SERVICE Lining Area	BRAKES SERVICE Drum Area	BRAKES SERVICE Drum Material	BRAKES Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	FRAME Type
1	Sterling Cont'd.																														
2	HW8235H		182	193	52000	16000	11.00/20	11.00/24	Cum HB600	6–4½x6	672	17	500	150–1800	7–4⅛x16½	Y	Fu 4B86	4	T-SW456P	WF	L5	66–8. 20	T-27454W	W861A	1308	1892	A	TX	92	9½x33½x¾	A
3	HC8195		170	189	48000	15300	10.00/20	11.00/22	Wau 146GK	6–5½x6½	625	6	420	142–2200	7–3¼x13⅜	Y	Fu5A62–3A92	15	Own 195W	CD	R6	.04–7. 31	T-3600TW	W861A	1082	1622	A	TX	92	9½x33½x¾	A
4	HC8265		182	193	60000	17750	11.00/20	12.00/24	Wau 145GK	6–5½x6	779	6	585	186–2100	7–3⅛x17⅜	Y	Fu 4B86♦	12	Own 265W	CD	R9	.21–13. 16	T-27454W	W861A	1060	1732	A	TX	92	9½x33½x¾	A
5	HC8297		182	193	70000	20750	12.00/24	13.00/24†	Wau 145GK	6–5½x6	779	6	585	186–2100	7–3⅛x17⅜	Y	Fu 4B86♦	12	Own 330W	CD	R9	.21–13. 16	T-27454W	W861A	1280	1872	A	TX	92	9½x33½x¾	A
6	HC8330		182	193	80000	24000	11.00/20	11.00/22	Cum HB600	6–4½x6	672	17	500	150–1800	7–3⅛x16½	Y	Fu4B86–3A92	12	Own 195W	CD	R6	.04–7. 31	T-3600TW	W861A	1060	1732	A	TX	92	9½x33½x¾	A
7	HC8195H		182	193	60000	18100	11.00/20	12.00/24	Cum HBD600	6–4½x6	762	17	500	150–1800	7–3⅛x16½	Y	Fu 4B86♦	12	Own 265W	CD	R9	.21–13. 16	T-27454W	W861A	1280	1872	A	TX	92	9½x33½x¾	AL
8	HC8297H		182	193	70000	21050	12.00/24†	13.00/24†	Cum HBD600	6–4½x6	672	17	500	150–1800	7–3⅛x16½	Y	Fu 4B86♦	12	Own 330W	CD	R9	.21–13. 16	T-27454W	W861A	1280	1872	A	TX	92	12x33½x¾	AL
9	HC8330H		182	193	80000	23450	12.00/24	14.00/24‡	Cum HBD600	6–4½x6	672	17	500	150–1800	7–3⅛x16½	Y	Fu 4B86♦	12	Own 330W	CD	R9	.21–13. 16	T-27454W	W861A	1280	1872	A	TX	92	12x33½x¾	AL
10	Truckstell																														
11	(C) F2X26 2F		156	237	26000	45900	7.50/20	8.25/20	Ford	8–3⅛x3¾	239	6	418	100–3800	3–2¼x4. 71	N	Ford	4	Eat 1350	SF		5. 83–8. 11	Ford	F61HV	502	836	c	TX	82½	7½x33x. 47	CT†
12	(C) F2X27–0 2F		156	237	27000	46450	7.50/20	8.25/20	Ford	8–3⅛x3¾	239	6	418	100–3800	3–2¼x4. 71	N	Ford	12	Cla R1300	SF		5. 67–6. 83	Ford	F61HV	502	1043	a	TX	82½	7½x33x. 47	CT†
13	(C) F2X34 2F		156	237	34000	48235	7.50/20	10.00/20	Ford	8–3⅛x3¾	239	6	418	100–3800	3–2¼x4. 71	N	Ford	12	Cla R1300	SF		5. 67–6. 83	Ford	F61HV	603	1043	a	TX	82½	7½x33x. 47	CT†
14	(C) F4X26 4R		144	210	26000	46300	7.50/20	8.25/20	Ford	8–3⅛x3¾	239	6	418	100–3800	3–2¼x4. 71	N	Ford	8	Ford	SF		6. 07–10. 5	Ford	F61HV	502	836	c	TX	63½	7½x33x. 47	CT†
15	(C) F4X27–0		144	210	27000	46300	7.50/20	8.25/20	Ford	8–3⅛x3¾	239	6	418	100–3800	3–2¼x4. 71	N	Ford	8	Ford	SF		6. 07–10. 5	Ford	F61HV	502	836	c	TX	63½	7½x33x. 47	CT†
16	(C) F4X29 4R		144	210	29000	47000	7.50/20	8.25/20	Ford	8–3⅛x3¾	239	6	418	100–3800	3–2¼x4. 71	N	Ford	16	Eat 1350	SFd		7. 47–12. 9	Ford	F61HV	502	836	c	TX	63½	7½x33x. 47	CT†
17	(C) F4X30–0		144	210	30000	47200	7.50/20	8.25/20	Ford	8–3⅛x3¾	239	6	418	100–3800	3–2¼x4. 71	N	Ford	16	Eat 1350	SFd		7. 47–12. 9	Ford	F61HV	502	836	c	TX	63½	7½x33x. 47	CT†
18	(C) C2X26 2F		157	234	26000	45800	7.50/20	8.25/20	Chevrolet	6–3⅜x3¾	235	6	619	93–3100	3–2⅜x5. 5	N	Chevrolet	4	Chevrolet	SFd		.5 64–8. 22	Chevrolet	C61HV	546	780	a	2I	82½	7½x33x. 47	CT†
19	(C) C2X28 2F		157	234	28000	46800	7.50/20	8.25/20	Chevrolet	6–3⅜x3¾	235	6	619	93–3100	3–2⅜x5. 5	N	C and BL	8	Cla R1300	SFd		.5 67–6. 83	Chevrolet	C61HV	546	780	a	TD	82½	7½x33x. 47	CT†
20	(C) C2X34–0		157	234	34000	48285	7.50/20	10.00/20	Chevrolet	6–3⅜x3¾	235	6	619	93–3100	3–2⅜x5. 5	N	C and BL	12	Cla R1300	SFd		.5 67–6. 83	Chevrolet	C61HV	546	780	a	2I	63½	7½x33x. 47	CT†
21	(C) C2X26 4R		145	212	26000	46120	7.50/20	8.25/20	Chevrolet	6–3⅜x3¾	235	6	619	93–3100	3–2⅜x5. 5	N	C and BL	8	Chevrolet	SFd		6. 41–11. 1	Chevrolet	C61HV	546	780	a	2I	63½	7½x33x. 47	CT†
22	(C) C4X27–0		117	184	27000	46215	7.50/20	7.50/20	Chevrolet	6–3⅜x3¾	235	6	619	93–3100	3–2⅜x5. 5	N	Chevrolet	8	Chevrolet	SFd		6. 47–12. 9	Chevrolet	C61HV	512	836	a	TD	63	7½x33x. 47	CT†
23	(C) C4X29 4R		145	212	29000	46880	7.50/20	8.25/20	Chevrolet	6–3⅜x3¾	235	6	619	93–3100	3–2⅜x5. 5	N	Chevrolet	16	Eat 1350	SFd		7. 47–12. 9	Chevrolet	C61HV	512	836	a	TD	63	7½x33x. 47	CT†
24	(C) C4X30–0		117	184	30000	47290	7.50/20	8.25/20	Chevrolet	6–3⅜x3¾	235	6	619	93–3100	3–2⅜x5. 5	N	Chevrolet	16	Eat 1350	SFd		7. 47–12. 9	Chevrolet	C61HV	512	836	a	TD	63	7½x33x. 47	CT†
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♦ Includes cab. † Rear only; Front 11.00/24. ‡ Rear only; Front 12.00/24. ♦ Auxiliary transmission spicer 8031.